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OFFICIAL CATALOGUE
OF THE
MEXICAN EXHIBITS
AT THE
PAN-AMERICAN EXPOSITION

Official Catalogue

of the

Mexican Exhibits

at the

Pan-American Exposition

Porfirio Diaz

President of the United States of Mexico

Mexico. Comision nacional para la Exposicion pan-americana, Buffalo, 1901.

OFFICIAL CATALOGUE

OF THE

Mexican Exhibits

AT THE

PAN-AMERICAN EXPOSITION

AT

BUFFALO, N. Y., U. S. A.

MAY FIRST TO NOVEMBER FIRST

1901

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The White-Evans-Penfold Company, Printers, in Buffalo

Secretary of the Department of Public Promotion, under the direction of whose Department Mexico's Exhibit at Buffalo is made

National Commission

from the United States of Mexico to the Pan-American Exposition

ALBINO R. NUNCIO,
Mechanical Engineer, Chief of the Commission.

MAXIMILIANO M. CHABERT,
Secretary of the Commission, and Chief of Divisions XIV, XV, and XVIII.

LAURO VIADAS,
Agronomical Engineer, Chief Divisions I, III, and IV.

JESUS M. NUNCIO,
Chief of Pomology and Viticulture, Division V.

ALBERTO MCDOWELL,
Chief of Floriculture, Division V.

ENRIQUE H. GARIBAY,
Chief of Division VI.

JUAN DE D. FLEURY,
Mining Engineer, Chief of Divisions VIII and X.

CARLOS SELLERIER,
Mining Engineer, Chief of Divisions XI and XIII.

ENRIQUE MONDRAGON,
Lieutenant Colonel of Engineers' Corps of the Mexican Army, Honorary Chief of Division XII.

ROSENDO SANDOVAL,
Assayor, Chief of Division XVI.

ANTONIO M. MAYA,
Second Chief of Division XVI.

1. Albino R. Nuncio.
2. Maximiliano M. Chabert.
3. Juan de D. Fleury.
4. Carlos Sellerier.
5. Rosendo Sandoval.
6. Enrique H. Garibay.
7. Alberto McDowell.
8. Jesús M. Nuncio.
9. Lauro Viadas.
10. Antonio M. Maya.

The numbers refer to the illustration opposite.

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12
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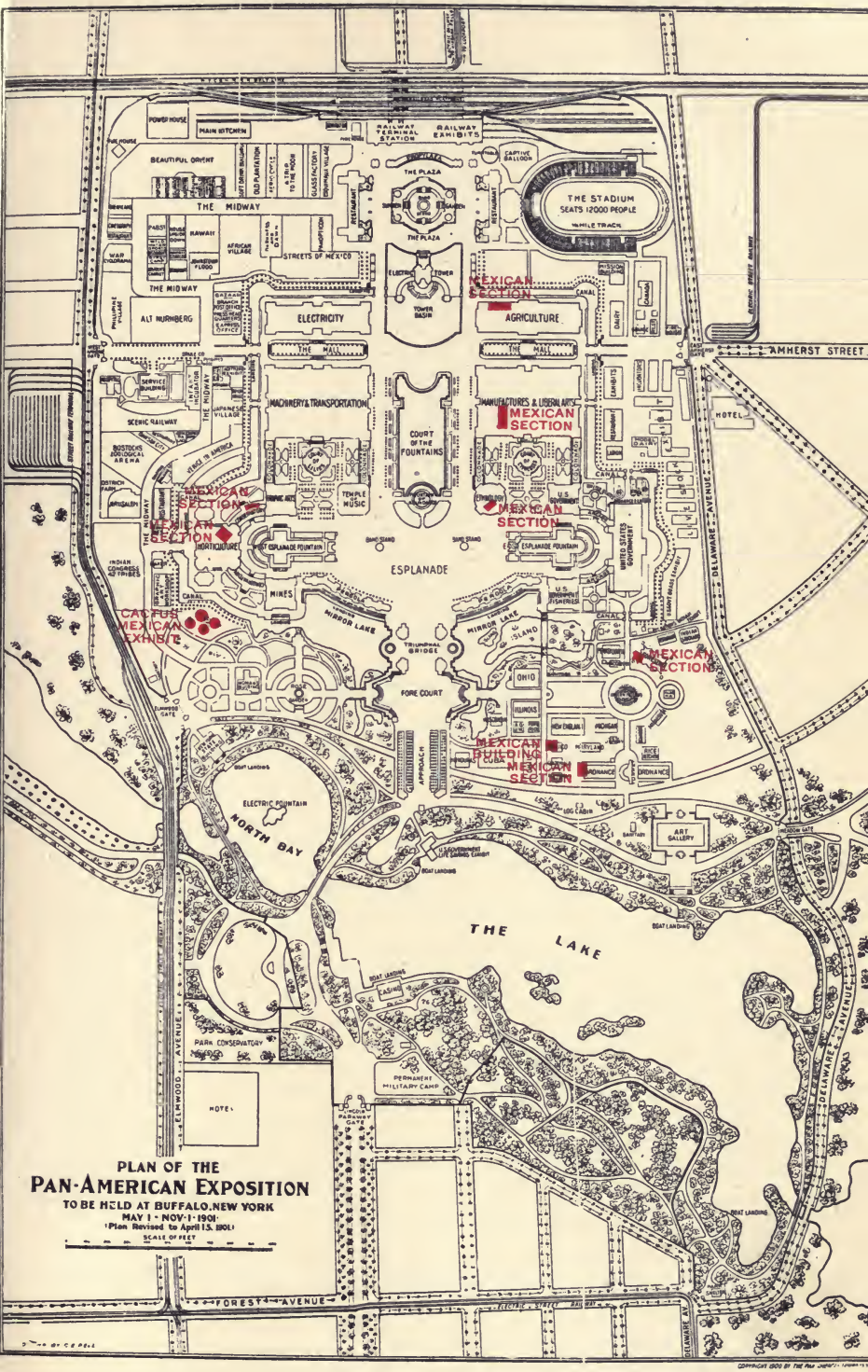
5

Illustrations


MEXICAN SECTION
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MEXICAN SECTION
MEXICAN BUILDING
CACTUS MEXICAN EXHIBIT
THE MIDWAY
THE PLAZA
THE STADIUM SEATS 12000 PEOPLE
ELECTRICITY
AGRICULTURE
MACHINERY & TRANSPORTATION
MANUFACTURES & LIBERAL ARTS
COURT OF THE FOUNTAINS
ESPLANADE
MIRROR LAKE
NORTH BAY
THE LAKE
AMHERST STREET
DELAWARE AVENUE
FOREST AVENUE
ELMWOOD AVENUE
PLAN OF THE
PAN-AMERICAN EXPOSITION
TO BE HELD AT BUFFALO, NEW YORK
MAY 1 - NOV. 1 - 1901
(Plan Revised to April 15, 1901)
SCALE OF FEET

Catalogue

DIVISION I

Agricultural and Dairy Products

Interior View of Agriculture Exhibit

Division I

Agricultural and Dairy Products

(Chief, Engineer Lauro Viadas)

GROUP I

Farm Crops

Class 2

1. Aguirre, Domingo G., La Fortuna, Tepic.
   Rice.
2. Albaitero y Cia, Tacubaya, D. F.
   Wheat.
3. Carpio, Doroteo, Matamoros, Puebla.
   Rice.
4. Couttolene, Octaviano, Aljojuca, Puebla.
   Cereals.
5. Drusina, Manuel D., Tlaxco, Tlaxcala.
   Cereals.
6. Echave, Manuel, Texmelucan, Puebla.
   Cereals.
7. Escandón, A., "La Condesa" Tacubaya, D. F.
   Corn and Barley.
8. Escudero, Pedro, Acolman, México.
   Cereals.
9. Flores, Gabriel, Saltillo, Coahuila.
   Corn.
10. García, Félix, Lerma, México.
    Cereals.
11. Gobierno del Estado de Aguascalientes, Aguascalientes.
    Cereals.
12. Gobierno del Estado de Chiapas, Tuxtla Gutierrez.
    Cereals.

For explanation of classification see index.

13. Gobierno del Estado de Chihuahua, Chihuahua.
Cereals.

14. Gobierno del Estado de Durango, Durango.
Cereals.

15. Gobierno del Estado de Guanajuato, Guanajuato.
Cereals.

16. Gobierno del Estado de Guerrero, Chilpancingo.
Cereals.

17. Gobierno del Estado de Hidalgo, Pachuca.
Cereals.

18. Gobierno del Estado de México, Toluca.
Cereals.

19. Gobierno del Estado de Morelos, Cuernavaca.
Beans.

20. Gobierno del Estado de Oaxaca, Oaxaca.
Corn and beans.

21. Gobierno del Estado de Puebla, Puebla.
Cereals.

22. Gobierno del Estado de Querétaro, Querétaro.
Cereals.

23. Gobierno del Estado de Sonora, Hermosillo.
Cereals.

24. Gobierno del Estado de Tabasco, San Juan Bautista.
Cereals.

25. Gobierno del Estado de Tlaxcala, Tlaxcala.
Cereals.

26. Gobierno del Estado de Zacatecas, Zacatecas.
Cereals.

27. González de Cosio José, Querétaro.
Beans.

28. González de Salceda, F. y E., Lerma, México.
Cereals.

29. González, Vicente, Tepetlaoxtoc, México.
Cereals.

30. Gorozpe, Pedro, Colón, Querétaro.
Cereals.

31. Guerrero, Ignacio, Chietla, Puebla.
Rice.

For explanation of classification see index.

The Mexican Government Building

Mexico at the Pan-American Exposition

DIVISION I

Agricultural and Dairy Products

DIVISION III

Live Stock

DIVISION IV

Foods and their Accessories

General View Exterior of Agriculture Exhibit
Agriculture Building
Mexico at the Pan-American Exposition

AGRICULTURE

THE exhibit made by the Republic of Mexico of her agricultural products is undoubtedly the best proof of the progress she has made within the last years, under the protection of Gen. Porfirio Díaz's wise administration.

The marvelous fertility of her soil is known and proved throughout the world, with regard to which we would be justified in saying that there is not a product grown which cannot be raised there with liberal profit to the cultivator. One of the problems that Mexico ought to have solved before this for the promotion of agriculture (a problem which emanates on the other hand from those topographical conditions that give her the diversity of climates, and its peculiarly advantageous conditions for the vegetable life of so many varied species) is that of irrigation, which Mexico is now solving in an excellent manner, by means of free grants of water privileges, under federal jurisdiction, and laws that protect, stimulate, and promote the investment of capital in the utilization of waters. To give an idea of the results obtained, it suffices to point out a single example: in the State of Puebla, an American farmer invested on his own account more than one million dollars in the necessary works for the utilization of the waters of the Atoyac River as a motive power and especially for irrigation purposes. It can be affirmed with-

out doubt, that before very long, and as a natural consequence of the works of this kind that are initiated every day, Mexico will have more than double her production, commensurate with the place she justly deserves among the chief agricultural countries of the world.

It would be superfluous to discuss this subject further, as the vast collection of samples of the agricultural products of Mexico are exhibited in the Agricultural Building.

Hence, the great collection of cereals exhibited by the *Secretaria de Fomento* (Department of Public Promotion) of Mexico, is indeed very notable, as it shows the different kinds that are cultivated in the various states of the Republic, many of which are articles of export, such as rice, beans, wheat, etc. The Mexican Agricultural Society, organized by prominent farmers and agriculturists, and founded with a view to promote anything bearing on the progress of agriculture, also makes an exhibit that reveals the agricultural resources of the country.

The exhibit contains samples of excellent tobacco produced in Mexico, large quantities of which have been shipped to Cuba where it was manufactured and re-shipped to European or North American markets with the pseudonym of "Havana cigars." Mexican tobacco is becoming very popular and is being very highly commended. It can be said that the production at present is insufficient to cover the ever growing demand for such an important product.

The varied collection of fibers, especially vegetable fibre, justly attracts the attention of visitors. Many of these have been known in this country for many years, such as jute, which has enriched the peninsula of Yucatan, making it a producing center to such an extent that, thanks to her, the cordage industry did not suffer all the mishaps that were expected on account of the scarcity of the much valued Manila fiber during the Philippine war.

If we are to examine now the various products that make up the important division of foods, we will see figuring prominently an extensive collection of coffee; there are samples on exhibition coming from each one of the states producers of that rich grain, and it is a fact well known that since the Brazilian crisis stimulated the production, Mexico has notably enhanced her coffee plantations, and this is now one of the most important articles of export. In competition with all the other coffee producing countries, Mexico has obtained the highest awards for her coffee in all the expositions that have been held up to the present time.

Cocoa is a product which also promises a great future in Mexico, and is exhibited by a varied collection together with chocolate manufactured by two of the most important factories in Mexico.

Notwithstanding the great competition that sugar cane has been subjected to on account of the increase in the production of sugar beets, it still holds its place vigorously, and is the founda-

tion of inexhaustable richness throughout the vast territories of the States of Morelos, Veracruz, Puebla, Jalisco, and many others. As a complementary to the sugar industry we might mention the production of alcohol, although only when employed in certain industries it pertains to this division.

The exquisite and varied collection of liquors is also worthy of special attention, because the fruits from which they are prepared in factories of the best established reputation, are equally abundant. National beverages on exhibition, such as "pulque," which is the favorite drink of the people, should not be passed unnoticed. This "pulque" is exhibited through a special process of preservation. Beer, whose consumption is increasing daily, receives such impulse in Mexico that it can be stated that there is not a state in the Republic without a brewery, some of them with more than $1,000,000 invested.

The above information is at least a brief outline of the agricultural resources of Mexico, and reveals, as we have already said, the great evolution that has taken place throughout the country within the last few years by the impulse of the vigorous administration of one of the greatest statisticians of the present time.

A careful inspection of the products exhibited by Mexico in the Department of Agriculture, will fully demonstrate the vast field of action she has for enterprising men.

32. Jefatura Politica del Distrito de Cuautitlán, México.
Cereals.

33. Jefatura Politica del Destrito de Texcoco, México.
Cereals.

34. Jiménez, Simón, Yautepec, Morelos.
Rice.

35. Leyva, Gregorio, Jojutla, Morelos.
Rice.

36. Lorenz, A., Puebla.
Wheat.

37. Mar, Ramón, Jalpan, Querétaro.
Cereals.

38. Martínez y Abiega, Cuautitlán, México.
Cereals.

39. Matienzo, Andrés, Puebla.
Wheat and Beans.

40. Mier, Sebastian B. de, Puebla.
Cereals.

41. Montero, Lucio, Cuautla, Morelos.
Rice.

42. Morales, Lauro, Ures, Sonora.
Cereals.

43. Nieto, Tirso Julian, Ixtlahuaca, México.
Cereals.

44. Ochoa, Tiburcio, Colima.
Rice.

45. Ortiz, Borbolla, Jacobo, Nopalucan, Puebla.
Cereals.

46. Ortiz y Yauz, Manuel, Acolman, México.
Cereals.

47. Obando, José M., Chiautzingo, Puebla.
Cereals.

48. Pérez, Justo, Tepetlaoxtoc, México.
Cereals.

49. Ramírez, Ramón, Apatzingán, Michoacán.
Rice.

50. Reyes y Ramírez, Pedro, Tepeaca, Puebla.
Cereals.

For explanation of classification see index.

51. Rico, Rafael G., Chimalhuacán, México.
Cereals.

52. Rios, Dionisio, Valle de Bravo, México.
Cereals.

53. Rincón Gallardo, Francisco, San Juan del Rio, Querétaro.
Cereals.

54. Rivera, José María, Laborcilla, Querétaro.
Cereals.

55. Sánchez, Miguel, Nopalucan, Puebla.
Cereals.

56. Santa Cruz, Francisco, Colima.
Rice.

57. Secretaría de Fomento, México, D. F.
Cereals.

58. Silva y Hermanos, Manuel, Guanajuato.
Cereals.

59. Sociedad Agrícola Mexicana, México, D. F.
Cereals.

60. Solorzano Sanz, J., México, D. F.
Cereals.

61. Torres, Lorenzo, Guaymas, Sonora.
Cereals.

62. Trueba Hermanos, México, D. F.
Cereals.

63. Valencia, Urbano, Tezoyuca, México, D. F.
Cereals.

64. Valle, F. del, Tepic.
Rice.

Class 3

65. Gobierno del Estado de Morelos, Cuernavaca.
Sweet potatoes.

Class 5

66. Balsa y Hermano, Veracruz.
Leaf tobacco.

67. Barron Forbes y Cia, Santiago Ixcuintla, Tepic.
Leaf tobacco.

68. Delius y Cia, Ixtapa Concepción, Tepic.
Leaf tobacco.

For explanation of classification see index.

69. Escandón, A., "La Condesa," Tacubaya, D. F.
Squash seed.

70. Fábrica, "La Virgen," Tajimaroa, Michoacán.
Beneseed.

71. Fletes, Testamentaría de Amado, Tepic.
Leaf tobacco.

72. Fregoso, J. M. de., Ameca, Jalisco,
Sugar cane.

73. Gobierno del Estado de Durango, Durango.
Oily seeds.

74. Gobierno del Estado de Guanajuato, Guanajuato.
Oily seeds.

75. Gobierno del Estado de México, Toluca.
Beneseed.

76. Gobierno del Estado de Morelos, Cuernavaca.
Peanuts, melon and squash seeds.

77. Gobierno del Estado de Oaxaca, Oaxaca.
Leaf tobacco.

78. Gobierno del Estado de Querétaro, Querétaro.
Oily seeds.

79. Gobierno del Estado de Sonora, Hermosillo.
Linseed.

80. Gobierno del Estado de Tabasco, San Juan Bautista.
Leaf tobacco and achiote (bixia orellana) butter color.

81. Gobierno del Estado de Tlaxcala, Tlaxcala.
Squash seed.

82. Lanzagorta Hermanos, San Blas, Tepic.
Leaf tobacco.

83. Menchaca, Agustín, Tuxpan, Tepic.
Oil cocoanut.

84. Pérez, Reguera, Luis, Oaxaca.
Leaf tobacco.

85. Secretaría de Fomento, México, D. F.
Seeds of several kinds.

86. Sociedad Agrícola Mexicana, México, D. F.
Oily seeds.

87. Solano, Dolores, Tlapanalá, Puebla.
Peanuts.

For explanation of classification see index.

Fibers and Fertilizers

Class 6

88. Agapito, Jesús, San Juan Bautista, Tabasco.
Ixtle (fiber).

89. Aguirre, Claudio, Tutotepec, Oaxaca.
Cotton.

90. Barroeta, Gregorio, San Luis Potosi.
Rug (made of "Palma China" fiber).

91. Carrillo, H., Colima.
Fibra tronadora (fiber).

92. Compañía Industrial de Artefactos, Mérida, Yucatán.
Sisal hemp.

93. Cuevas, Hilario, Tolimán, Jalisco.
Camolillo (fiber).

94. Espinoza Cuevas, Hermanos, Angostura, San Luis Potosi.
Cotton.

95. Espinoza, Primo F., Armadillo, San Luis Potosi.
Ixtle (fiber).

96. Fentanes, E., Cosamaloapan, Veracruz.
Majahua y Cardón (fibers).

97. Gobierno del Estado de Chiapas, Tuxtla Gutierrez.
Ixtle (fiber).

98. Gobierno del Estado de Durango, Durango.
Lechuguilla (fiber).

99. Gobierno del Estado de Oaxaca, Oaxaca.
Collection of fibers.

100. Gobierno del Estado de San Luis Potosí, San Luis Potosí.
Lechuguilla (fiber).

101. Gobierno del Estado de Tabasco, San Juan Bautista.
Collection of fibers.

102. Gobierno del Estado de Yucatán, Mérida.
Sisal hemp.

103. Ibañez, Julio, Los Cuartos, Tepic.
Lechuguilla (fiber).

For explanation of classification see index.

104. Jefatura Política de Amealco, Querétaro.
Ixtle (fiber).

105. Melgar, José María, Manzanillo, Colima.
Textile plants.

106. Menchaca, José María, Ixcuintla, Tepic.
Cotton.

107. Muñoz, Adalberto, Galeana, Nuevo León.
Fiber.

108. Nieto, Tirso Julian, Ixtlahuaca, México.
Ixtle (fiber).

109. Peiro Hermanos, Mocorito, Sinaloa.
Ixtle (fiber).

110. Purcell, Guillermo, San Pedro, Coahuila.
Cotton.

111. Retes Hermanos, Mocorito, Sinaloa.
Ixtle (fiber).

112. Secretaría de Fomento, México, D. F.
Collection of fibers.

113. Sociedad Agrícola Mexicana, México, D. F.
Cotton.

114. Subprefectura de los Municipios de San José y Santiago, Baja California.
Cotton.

115. Urviola, Ignacio, Landa, Querétaro.
Sisal hemp.

116. Valdés, Abundio, Aguascalientes, Sinaloa.
Ixtle (fiber).

117. Vega, Manuel de la, Vizarrón, Querétaro.
Ixtle (fiber).

118. Zorrilla, Bernardo, Jaumave, Tamaulipas.
Ixtle and sisal hemp.

119. Zorrilla, Federico José, Costa Chica, Oaxaca.
Cotton.

120. Gobierno del Estado de Jalisco, Guadalajara. **Class 7**
Raw silk and cocoons.

121. Gobierno del Estado de Zacatecas.
Wool.

For explanation of classification see index.

122. Sociedad Agrícola Mexicana, México, D. F.
Wool.

Class 8

123. Gobierno del Estado de Durango, Durango.
Wax.

124. Gobierno del Estado de Guanajuato, Guanajuato.
Wax.

125. Gobierno del Estado de Zacatecas, Zacatecas.
Wax.

126. Monroy, Everardo, Jala, Tepic.
Wax.

127. Santa Cruz, Francisco, Colima.
Wax.

128. Secretaría de Fomento, México, D. F.
Wax.

GROUP IV.

Literature and Statistics

129. Bankhardt, D., México, D. F. — Class 12
"El Hacendado Mexicano," (an agricultural review).

130. Covarrubias, Gregorio, Pénjamo, Guanajuato.
Study about the sugar cane.

131. Escobar Hermanos, Ciudad Juárez, Chihuahua.
"El Agricultor Mexicano," (an agricultural review) and "Elemental Treatise on Agriculture."

132. Jaspeado, Ruperto, Texcoco, México.
Study about the wheat.

133. Portillo, A., México, D. F.
"La Revista Agrícola" (an agricultural review).

134. Secretaría de Fomento, México, D. F.
Laws on public waters.

135. Sociedad Agrícola Mexicana, México, D. F.
"Boletín de la Sociedad Agrícola Mexicana" (an agricultural review).

136. Cuesta é Hijos, Manuel M., Atequiza, Jalisco. — Class 13
Album of photographs of their farm.

137. Junta Local de Puebla para la Exposición de Paris de 1900, Puebla.
Album of photographs and agricultural statistics.

For explanation of classification see index.

DIVISION III

Live Stock

Division III

Live Stock

(Chief, Engineer Lauro Viadas)

GROUP X

Domestic Animals

1. Martínez del Cerro, J., Tacubaya, D. F. **Class 33**
   Photographs of cattle.

GROUP XIII.

Literature and Statistics

2. González Dávalos, Luis, México, D. F. **Class 42**
   " El Ganadero Mexicano " (Treatise on live stock).

For explanation of classification see index.

DIVISION IV

Foods and their Accessories

Interior of Agriculture Exhibit
Agriculture Building

Division IV

Foods and their Accessories

(Chief, Engineer Lauro Viadas)

GROUP XIV

Coffees, Teas, Spices, and Essences

Class 43

1. Albino, Leandro, Yecapixtla, Morelos.
   Coffee.
2. Alfaro, Emigdio D., Chilchotla, Oaxaca.
   Coffee.
3. Arciniega, Aurelio, Coatepec, Veracruz.
   Coffee.
4. Arias, José C., Chietla, Puebla.
   Coffee.
5. Artigas, Gabriel C., San Andrés Tuxtla, Veracruz.
   Coffee.
6. Avendaño, Antonio, Chilchotla, Oaxaca.
   Coffee.
7. Ayuzo, B., Juquila, Oaxaca.
   Coffee.
8. Bano, Eugenio D., Chilchotla, Oaxaca.
   Coffee.
9. Becerra Fabre, Belisario, San Juan Bautista, Tabasco.
   Coffee and cocoa.
10. Cafetal Santiago, Chilchotla, Oaxaca.
    Coffee.
11. Camacho, Ismael, Quechula, Chiapas.
    Coffee and cocoa.
12. Campos, Ricardo de Maria, Tapachula, Chiapas.
    Coffee.

13. Cano, Modesto, Quechula, Chiapas.
Coffee.

14. Cortés, Anselmo, Tlapacoyan, Veracruz.
Coffee.

15. Díaz Ordaz y Cia, Chilchotla, Oaxaca.
Coffee.

16. Dondé, Eduardo, Coatepec, Veracruz.
Coffee.

17. Escudero, Francisco, Tepic.
Coffee.

18. Esperón, Manuel, Chilchotla, Oaxaca.
Coffee.

19. Finca Esperanza S. A., Teotitlán, Oaxaca.
Coffee.

20. Finca Mercedes, Teotitlán, Oaxaca.
Coffee.

21. Flor, José, Jalapa, Veracruz.
Chocolate.

22. García, Mariano, Chilchotla, Oaxaca.
Coffee.

23. Gobierno del Estado de Chiapas, Tuxtla Gutierrez.
Coffee and cocoa.

24. Gobierno del Estado de Jalisco, Guadalajara.
Coffee.

25. Gobierno del Estado de Michoacán, Morelia.
Coffee.

26. Gobierno del Estado de Morelos, Cuernavaca.
Coffee.

27. Gobierno del Estado de Oaxaca, Oaxaca.
Coffee.

28. Gobierno del Estado de Puebla, Puebla.
Coffee.

29. Gobierno del Estado de San Luis Potosí, San Luis Potosí.
Coffee.

30. Gobierno del Estado de Tabasco, San Juan Bautista.
Tea, coffee, and cocoa.

31. Gobierno del Estado de Veracruz, Xalapa.
Coffee.

For explanation of classification see index.

32. Gómez Vargas, Rafael, Córdova, Veracruz.
Coffee.

33. Hernandez, Agustín, Chilón, Chiapas.
Coffee.

34. Jarilla, Emiliano, Pahuatlán, Puebla.
Coffee.

35. Jefatura Pólitica del Territorio de Tepic.
Coffee.

36. Jefatura Pólitica de Zitácuaro, Michoacán.
Coffee.

37. López, Felipe N., Coatepec, Veracruz.
Coffee.

38. Manuel, Ponciano, Tacámbaro, Michoacán.
Coffee.

39. Mercado, Aristeo, Uruapan, Michoacán.
Coffee.

40. Mercado de Romano, Leonor, San Blas, Tepic.
Coffee.

41. Mexican Gulf Agricultural Company, Dos Rios, Veracruz.
Coffee.

42. Moreno, Andrés, Amilcingo, Morelos.
Coffee.

43. Noriega Sámano, Alonso, México, D. F.
Chocolate.

44. Olguín, Estanislao, Calnalí, Hidalgo.
Coffee.

45. Park y Bergofe, Chilchotla, Oaxaca.
Coffee.

46. Pérez, Aurelio, San José Purúa, Michoacán.
Coffee.

47. Popoca, Refugio, Tilapa, Puebla.
Coffee.

48. Portillo, J. O., Chilchotla, Oaxaca.
Coffee.

49. Pradillo, Agustín, Teotitlán, Oaxaca.
Coffee.

For explanation of classification see index.

50. Régules Hermanos, Chilchotla, Oaxaca.
Coffee.

51. Rodríguez, Mariano, Pátzcuaro, Michoacán.
Coffee.

52. Rojas, Ponciano, Pichucalco, Chiapas.
Cocoa.

53. Rozas, Justo, San Juan Bautista, Tabasco.
Coffee.

54. Santa Cruz, Francisco, Colima.
Coffee.

55. Secretaría de Fomento, México, D. F.
Coffee and cocoa.

56. Sociedad Agrícola Mexicana, México, D. F.
Coffee and cocoa.

57. Solórzano, Ildefonso, Tacámbaro, Michoacán.
Coffee.

58. Tellez, Antonio, Huauchinango, Puebla.
Coffee.

59. Tellez, Antonio, Villa Juárez, Oaxaca.
Coffee.

60. Tromblin Brijan E., Córdova, Veracruz.
Coffee.

61. Velez Arriaga, Luis, Soconusco, Ciapas.
Cocoa.

62. Vogel, Arnoldo, Colima.
Coffee.

63. Zaragoza, Santos, Tlalnepantla Cuautengo, Morelos.
Coffee.

64. Zúñiga, Adalberto, Huazalingo, Hidalgo.
Coffee.

Class 44

65. Ball, Juan W., Durango.
Vinegar.

66. Gabiño, Salvador, México, D. F.
Vinegar.

67. Gobierno del Estado de Aguascalientes, Aguascalientes.
Red pepper.

68. Gobierno del Estado de Chiapas, Tuxtla Gutierrez.
Spices.

69. Gobierno del Estado de Jalisco, Guadalajara.
Green pepper.

70. Gobierno del Estado de Tlaxcala, Tlaxcala.
Red pepper.

71. Merino, S., Mizantla, Veracruz.
Mizantleca sauce.

72. Sociedad Agrícola Mexicana, México, D. F.
Red pepper.

73. Tardós é Hijos, Julio, México, D. F.
Vinegar.

74. Jaspeado, Ruperto, Texcoco, México. Class 45
Olive oil.

75. Vazquez, José G., Ayotla, México.
Olive oil.

GROUP XV

Sugars

76. Aguirre, Domingo G., Tepic. Class 46
Cane sugar.

77. Almada y Hermanos, Jesús, Novalato, Sinaloa.
Cane sugar.

78. García, Pimentel Luis, Sta Clara, Jinacatepec, Morelos.
Cane sugar.

79. Gobierno del Estado de Jalisco, Guadalajara.
Brown sugar.

80. Gobierno del Estado de Morelos, Cuernavaca.
Cane sugar.

81. Méndez, Epifanio, Guadalajara, Jalisco.
Cane Sugar.

82. Subprefectura de los Municipios de San José y Santiago, Baja California.
Cane sugar.

Class 47

83. Gobierno del Estado de Durango, Durango.
Agave syrup.

84. Municipio de C. Guerrero, Tamaulipas.
Agave syrup.

Class 48

85. Gobierno del Estado de Durango, Durango.
Honey.

GROUP XVI

Preserved Fruits

Class 49

86. Bentley & Harris, Colonia Juárez, Galeana, Chihuahua.
Preserved fruits.

GROUP XVII

Nuts, Mushrooms, Dried Fruits, and Vegetables

Class 52

87. Gobierno del Estado de Durango, Durango.
Nuts and pine nuts.

88. Pérez, José, Cuilapan, Oaxaca.
Nuts.

89. Sociedad Agrícola Mexicana, México, D. F.
Nuts and pine nuts.

GROUP XVIII

Foods Prepared from Cereals

90. Albaitero y Cia, Tacubaya, D. F. — Class 56
Flour.

91. Cervantes, Testamentaria de M., México, D. F.
Flour.

92. Gobierno del Estado de Aguascalientes, Aguascalientes.
Flour.

93. Hidalgo, Gumersindo, México, D. F.
Fecula oriental (special flour).

94. Lorenz, A., Puebla.
Flour.

95. Martínez del Cerro, J., Tacubaya, D. F.
Flour.

96. Pérez Arce, Carlos, Guadalajara, Jalisco.
Sago.

97. Rivero Succs, V., Monterrey, Nuevo León. — Class 57
Maicena.

98. Compañía Industrial, Hermosillo, Sonora. — Class 59
Starch.

GROUP XIX

Beverages for Household and Other Uses

99. Lastinere, E., Puebla. — Class 63
Ginger ale and sarsaparilla

100. Pérez Arce, Guadalajara, Jalisco.
Ginger ale.

101. Almada y Hermanos, Jesús, Novalato, Sinaloa. — Class 64
Liquors.

102. Camacho, Timoteo, Querétaro.
Liquors.

103. Cattucci, Horacio, Xalapa, Veracruz.
Orange wine.

104. Compañía Destiladora, México, D. F.
Liquors.

105. Compañía Destiladora "Casa Colorada," México, D. F.
Liquors.

106. Córdova, Federico, Zacualtipán, Hidalgo.
Liquors.

107. Díaz, Aurelio, Querétaro.
Quince wine.

108. Fuentes Solís, Fernando, Zacualtipán, Hidalgo.
Quince wine.

109. Galicia, C., Puebla.
Orange wine.

110. Gálvez, A., Coatepec, Veracruz.
Liquors.

111. García, Joaquín, Texcoco, México.
Liquors.

112. Jaspeado, Ruperto, Texcoco, México.
Agavino (liquor).

113. Maldonado, Ramón, Monterrey, Nuevo León.
Liquors.

114. Martínez, P., Zacatlán, Puebla.
Liquors.

115. Mena, Evaristo, Campeche.
Marañón wine.

116. Meza y Cia, Querétaro.
Quince wine.

117. Mogrovejo, Juan, Calnalí, Hidalgo.
Orange wine.

118. Moral, Tomás del, Toluca, México.
Liquors.

119. Ochoa y Avilez, Fuerte, Sinaloa.
Liquors.

120. Pendas, Manuel, Zacualtipán, Hidalgo.
Quince wine.

For explanation of classification see index.

121. Ramirez, Tomás A., Molango, Hidalgo.
Liquors.

122. Riquelme, S., México, D. F.
Pulque.

123. Sousa Rodríguez, Juan, Acaponeta, Tepic.
Liquors.

124. Ugalde, Agripino, Zacualtipán, Hidalgo.
Orange wine.

125. Uribe, Macedonio, Texcoco, México.
Orange wine.

126. Vargas, M., Colima.
Liquors.

127. Compañía Destiladora, México, D. F. **Class 65**
Alcohol.

128. Cuesta Gallardo é Hijos, Manuel M., Atequiza, Jalisco.
Alcohol.

129. Rodríguez, Ramón, Querétaro.
Alcohol.

130. Santa Cruz, Francisco, Colima.
Alcohol.

131. Sociedad Agrícola Mexicana, México, D. F.
Alcohol.

132. Solórzano y Sanz, J., México, D. F.
Alcohol.

133. Vogel, Arnoldo, Colima.
Alcohol.

134. Compañía Cervecera de Chihuahua S. A., Chihuahua. **Class 66**
"Edelweiss," "Exposición," and "Carta Plata" beers.

135. Fábrica de Cerveza "El León," León, Guanajuato.
"Bock" and "Perla de Oro" beers.

For explanation of classification see index.

DIVISION V

Horticulture

Pomology, Floriculture, Viticulture

HORTICULTURE

MEXICO possesses climate and soil for the development of horticulture in all its branches, but as yet with the exception of a few products it is not carried on in a sufficiently large scale for export. The climate of the table lands is admirably adapted, with the aid of irrigation, for the cultivation of all fruits. Apples, peaches, figs, pears, and apricots are produced in abundance for the local markets, but no efforts have been made for drying and preserving these fruits on a large scale. In some sections the fruits are rich and of very fine flavor on account of the good soil and limited rain. The States of Coahuila and Chihuahua possess large tracks of lands where pomology could be engaged in extensively to good profit, if proper plants were erected for the drying and evaporating of the surplus fruit. Grapes are also produced in abundance and excellent wine is manufactured in the State of Coahuila, but not yet sufficient to meet the demand, as large quantities are imported.

To the east and west of the table lands, on the slopes of the Gulf and the Pacific, is the region for the production of tropical fruits—bananas, pineapples, mangoes, mameyes, oranges, limes, and citrus family in general; chirimoyas and anona species grown luxuriantly. With the exception of oranges at certain seasons of the year no other fruits are cultivated for export.

In vegetables, recently, the truck farmer has established in the State of Tamaulipas experimental farms for the cultivation of tomatoes — farms that have become practical and profitable, as already carloads are sent early to market for export. Later, probably, the truck farmer of Mexico will export also cucumbers, green corn, and melons in winter, as it is at this season that these vegetables are cultivated to greater advantage.

It will be some time, however, before other fruits and vegetables will be exported; the excessive express rates are almost prohibitive for their profitable cultivation. Another great drawback to the industry is the costly packing of fruits and vegetables.

Outside of the City of Mexico commercial floriculture, with few exceptions, can be said not to exist, as the climate being so mild, anyone can be his or her own florist.

Geraniums and pelargoniums, carnations, and begonias, and all annuals thrive well in any part of the country, as do also the lilies, amarylis, and other bulbous plants. Roses are quite abundant everywhere and the fancy varieties are mostly propagated by grafts. The camellia and azalea are favorite pot plants and are yet imported in quantities, but suitable climate and soil has been discovered for their propagation and importations will probably soon diminish.

Mexico exports the largest variety of cactus of any country in the world, but these plants, which are found almost exclusively on the dry

and arid parts of mountains, find no place with the florist except for rock work and alpine gardens. Many new species have been recently discovered and collectors continue to add novelties to the already long list of cactaceæ.

Orchids are found at altitudes varying from 3,000 to 5,000 feet above sea level, and these lovely plants are also exported in large quantities to Europe, chiefly the laelias and odontoglossums. Among the former may be mentioned L. Autummalis and L. Mayalis, also the great variety of L. Anceps Alba. There is yet a vast territory to the Pacific to be explored botanically and many new additions may be expected to floriculture. In the same region that orchids grow may be found a great variety of ornamental foliage plants, like dracenas, mazaultras, and palms, also climbers and ferns.

Large quantities of bulbs, collected in a wild state, are annually exported, chiefly amarylis, milla biflora, bessera elegans, and tigridias. There are many regions in southern Mexico where the lilies like L. Harrisi and L. Aurabum could be profitably grown for export, also many rare flower seeds that cannot mature in northern latitudes, but this branch of the industry has not yet been developed.

Vine culture in Mexico is obtaining a gradual and steady development, and the local consumption of wines and liquors is also attaining a great importance.

The country already produces red and white vines of extra fine quality, but still imports from

foreign countries more than $2,200,000 worth of these same wines each year.

It is worthy of mention that the Mexican vine has not been attacked so far by the phyloxera, nor by any other insect so destructive as this one.

The production of "pulque," the popular and national drink (made of liquids extracted from the agave tree), reached the enormous figure of 3,000,000 hectoliters yearly.

In this Republic is also produced wines of agreeable odor and delicious flavor made from quince, orange, and pineapple fruits.

Many modern establishments in Mexico are entirely given up to the manufacture of all kinds of liquors and alcohols. "Tequila," already well known in the United States, is one of the principal alcoholic drinks manufactured and consumed in Mexico.

Division V

Horticulture

Pomology, Floriculture, Viticulture

Pomology

(Chief, Jesús M. Nuncio)

GROUP XXIII

Models

1. Gobierno del Estado de Durango, Durango. **Class 81**
   Imitation of fruits in wax.
2. Gobierno del Estado de Oaxaca, Oaxaca.
   Imitation of fruits in wax.
3. Gobierno del Estado de Sonora, Hermosillo.
   Imitation of fruits in wax.
4. Gobierno del Estado de Tabasco, San Juan Bautista.
   Imitation of fruits in wax.
5. Junta local del Estado de Puebla, Puebla.
   Imitation of fruits in wax.
6. Peñafiel Esther, México, D. F.
   Imitation of fruits in wax.

GROUP XXIV.

Methods and Appliances

7. Sociedad Agrícola Mexicana, México, D. F. **Class 83**
   Canned fruits.

GROUP XXV.

Literature

Class 84

8. Secretaría de Fomento, Colonización é Industria, México, D. F.
Album of Mexican fruits.

Floriculture

(Chief, Alberto McDowell)

GROUP XXVII

Pelargoniums

Class 90

9. McDowell, Alberto, Tacubaya, D. F.
Collection of fancy pelargoniums

GROUP XXVIII

Flowering Bulbous Plants

Class 100

10. McDowell, Alberto, Tacubaya, D. F.
Collection of 500 single tuberous begonias.
Collection of 500 double tuberous begonias.

Class 101

11. McDowell, Alberto, Tacubaya, D. F.
Flowering bulbs.

Amarylis Formossisima,
Bessera Elegans,
Cyclobothra Flava,
Milla Biflora,
Zephyrantes Alba and Rosea,
Tigridias Pavonia,
Conchiflora and Rosea,
Pancratuim sps.

Floriculture Exhibit

Horticulture Building

GROUP XXXII

Greenhouse Flowering Plants

12. McDowell, Alberto, Tacubaya, D. F. **Class 112**
Collection of camelias.

GROUP XXXIII

Decorative Plants

13. McDowell, Alberto, Tacubaya, D. F. **Class 113**

Latania Borbonica,
Kentia Forsteriana,
Phienix Canariensis,
Chamedoria Gracilis.
Kentia Belmoriana,
Corypha Australis,
Chamedoria Elegans,

GROUP XXXIV

Orchids

14. McDowell, Alberto, Tacubaya, D. F. **Class 123**

Brassavola Glauca,
Brassia Verrucosa,
Catleya Citrina,
Chysis Aurea,
Chysis Bractescens,
Epidendrum Falcatum,
E. Nemorale,
E. Vitellinum Majus,
Laelia Albida,
Laelia Anceps,
L. Anceps Alba in var.,
L. Autumnalis,
L. Atrorubens,
L. Majalis,
L. Majalis Alba,
L. Majalis Rosea,
Lycaste Aromatica,
Lycaste Cruenta,
Mormodes sps.,
Odontoglossum Bictoniense,
O. Cervantessi,
O. Citrosnum,
O. Cordatum,
O. Insleayi,
O. Maculatum,
O. Nebulosum,
O. Rechenheimi,
Oncidium Bicalosum,
On. Cavendishanum,
On. Cebolleta,
On. Tigrinum,
On. Ornythornychum,

For explanation of classification see index.

Orchids, continued

On. Stelligerum,
On. Tigrinum,
On. Unguiculatum,
Schomburgkia Tibicinis,
Sobralia Macrantha,
Stanhopea Tigrinia,
S. Oculata,
S. Martiana.

GROUP XXXV

Cactaceæ

Class 124 15. McDowell, Alberto, Tacubaya, D. F.

Anhalonium Fissuratum,
A. Lewini,
A. Prismaticum,
A. Sulcatum,
A. Williamsi,
Cereus Serpentinus,
C. Euphorbioides,
C. Flagelliformis,
C. Gemantus,
C. Passacanus,
C.Puginiferous Geometrizans
C. Speciossisimus,
Other unclassified cereus.

Echinocactus

E. Beguini,
E. Bicolor,
E. Capricornis,
E.Cornigereus Flavispinus,
E. Crispatus,
E. Electracanthus,
E. Grusoni,
E. Helophorus,
E. Horizonthalonious,
E. Ingens,
E. Lancifer,
E. McDowelli,
E. Lophothele,
E. Caespitosus,
E. C. Merkeri,
E. Multicostatus,
E. Ornatus,
E. Pfeifferi,
E. Recurvus,
E. Robustus,
E. Sheeri,
E. Pilosus,
E. Pilosus Steinssi,
E. Texensis,
E. Turbiniformis,
E. Uncinatus,
E. Cereus Berlandieri,
E. C. Ehrenbergi,
E. C. Pectinatus.

Cactus Exhibit

Southern ground portion of the Horticulture Building

Mamillaria

M. Aplanata,	M. Carreti,
M. Cirhifera Longispina,	M. Cornifera,
M. Cornuta,	M. Damonoceras,
M. Donati,	M. Echinata,
M. Elegans,	M. Elephantidens,
M. Erecta,	M. Eriacantha,
M. Heeseana Longispina,	M. Lassomeri,
M. Micromeris,	M. Micromeris Greggi,
M. Mutabilis,	M. Nivea,
M. Nicholsoni,	M. Parkinsoni,
M. Pfeifferi,	M. Plumosa,
M. Potosina,	M. Recurvata,
M. Recurvens,	M. Sanguinea,
M. Scolymoides,	M. Spinossisima,
M. Stella Aurata,	M. Waltoni,
Pilocereus Fosulatus,	Pc. Hoppenstedti,
P. C. Senelis,	Pelecyphora Asceliformis,
Opuntia Microdasy,	M. Micromeris Cristata,
Mamillaria Nivia Cristata,	Cereus Columbrinus Cristata,
M. Lassomeri Cristata,	Cereus Pasacanus Cristata.

GROUP XXXVII

Climbing Plants

16. McDowell, Alberto, Tacubaya, D. F. **Class 130**
Tender climbing plants.
Cobea, Scandens, Mina, Lobata.

GROUP XXXVIII

Wild Plants

17. McDowell, Alberto, Tacubaya, D. F. **Class 132**
Native wild plants.

Tillandasias,	Sellanigella Lepidophyla,
Agave Americana,	Americana Variegata,
Tehuacanensis,	A. Victoria Regina,

10 other unclassified agaves.

For explanation of classification see index.

GROUP XLIV.

Literature

Class 146

18. Secretaría de Fomento, Colonización é Industria, México, D. F.
Album of flowers which grow in México.

Viticulture

(Chief, Jesús M. Nuncio)

GROUP XLVI

Wines and Brandies

Class 153

19. Chalon Hermanos, Apam, Hidalgo.
White wine.

20. Gobierno del Estado de Aguascalientes, Aguascalientes.
White wine.

21. González Treviño, Lorenzo, Parras, Coahuila.
White wine.

22. Rancho Grande, Fresnillo, Zacatecas.
White wine.

23. Torres Hermanos, Nazas, Durango.
White wine.

Class 154

24. Barrios y Murga, México, D. F.
Red wine.

25. González Treviño, Lorenzo, Parras, Coahuila.
Red wine.

26. Vargas, M., Colima.
Red wine.

Class 155

27. Dávila, Ignacio, Guadalajara, Jalisco.
Muscatel.

28. García, Joaquín, Texcoco, México.
Vermouth.

Wines and Horticulture Exhibit

Horticulture Building

Mexico at the Pan-American Exposition

29. González Treviño, Lorenzo, Parras, Coahuila.
Cherry, port wine, and wine "jerezado."

30. Chalon Hermanos, Apam, Hidalgo. **Class 156**
Champagne (made from "pulque").

31. Audinot, Francisco, Aguascalientes. **Class 157**
Brandy.

32. Arellanes, Longinos, Ocotlán, Oaxaca.
Mezcal.

33. Becerra Fabre, Carlos, Macuspana, Tabasco.
Brandy.

34. Casa Colorada, S. A., México, D. F.
Cognacs, rum, and brandy.

35. Casillas, Pilar, Ensenada, Baja California.
Brandy.

36. Castillo Hermanos, Santa Elena, Durango.
Mezcal.

37. Compañía Destiladora "La Kentucky" Monterrey, Nuevo León.
Whiskey and mezcal.

38. Compañía Destiladora, México, D. F.
Brandy.

39. Cuevas, Andrés, Miahuatlán, Oaxaca.
Mezcal.

40. Cruz, Sabás, Guadalajara, Jalisco.
Tequila.

41. Cruz, Eulogio, Santo Tomás, Oaxaca.
Mezcal.

42. Delius y Compañía, Tepic.
Banana brandy.

43. Destilería del Torreón, Torreón, Coahuila.
Whiskey.

44. Encinas, Alfredo, Sahuaripa, Sonora.
Mezcal.

45. Fábrica "La Escondida," Tepic.
Brandy.

46. Filizola Hermanos, Ciudad Victoria, Tamaulipas.
Mezcal.

For explanation of classification see index.

47. García Hermanos, Otumba, México.
Brandy (made from pulque).

48. García, Jesús, San Luis Potosí.
Mezcal.

49. García, Joaquín, Texcoco, México.
Brandy and cognac.

50. Gobierno del Estado de Aguascalientes, Aguascalientes.
Brandy.

51. Gobierno del Estado de Morelos, Cuernavaca.
Mezcal.

52. Gobierno del Estado de Zacatecas, Zacatecas.
Mezcal.

53. González Treviño, Lorenzo, Parras, Coahuila.
Brandy.

54. Guzman, Bernabé, Ocotlán, Oaxaca.
Mezcal.

55. Jarquin, Mariano, Zoquitlán, Oaxaca.
Mezcal.

56. Jesús, Juan Pedro, Miahuatlán, Oaxaca.
Mezcal.

57. Ledesma, Genoveva, Zimapán, Hidalgo.
Mezcal.

58. Ledesma, Federico, Zimapán Hidalgo.
Mezcal.

59. López, Melesio, Sinaloa.
Mezcal.

60. Maldonado, Ramón, Monterrey, Nuevo León.
Brandy.

61. Mantilla, José M., San Juan Bautista, Tabasco.
Mezcal.

62. Martínez, José, Tlacolula, Oaxaca.
Mezcal.

63. Martínez, Juan, San Pedro Quiatoni, Oaxaca.
Mezcal.

64. Martínez, L., Hostotipaquillo, Jalisco.
Mezcal.

65. Martínez, Viuda de, Guadalajara, Jalisco.
Tequila.

For explanation of classification see index.

66. Mendoza, E., La Paz Baja California.
Mezcal.

67. Mendoza, Simón, La Paz Baja California.
Mezcal.

68. Mora, Ramón de la, Guadalajara, Jalisco.
Tequila.

69. Muñóz, Manuel, Tlaltizapán, Hidalgo.
Mezcal.

70. Nuñez, Juan, Sinaloa.
Mezcal.

71. Ochoa y Avilés, Fuerte, Sinaloa.
Brandy.

72. Ortega, Cármen, Hermosillo, Sonora.
Mezcal.

73. Parada, Miguel, Ocotlán, Oaxaca.
Mezcal.

74. Peiro Hermanos, Hacienda de Pericos, Sinaloa.
Mezcal.

75. Ramirez é Hijos, San Luis Potosí.
Mezcal.

76. Retes Hermanos, Hacienda de Pericos, Sinaloa.
Mezcal.

77. Remus, Hijas de, Guadalajara, Jalisco.
Brandy.

78. Riquelme, S., México, D. F.
Brandy.

79. Romero, Francisco, Tequila, Jalisco.
Mezcal.

80. Samperio, Ignacio, Pachuca, Hidalgo.
Mezcal.

81. Sociedad Agrícola Mexicana, México, D. F.
Mezcal.

82. Solórzano y Sanz, México, D. F.
Brandy (made from pulque).

83. Tardós, Julio, México, D. F.
Whiskey, cognac, rum, and brandy.

84. Terán, Juan, Ciudad Victoria, Tamaulipas.
Mezcal.

For explanation of classification see index.

85. Valdés, Abundio, Aguacaliente, Sinaloa.
Brandy.

86. Villareal, J. M., México, D. F.
Cognac.

87. Zamora, Ciriaco, Miacatlán, Morelos.
Mezcal.

88. Zertuche, A., Ciudad Romero Rubio, Coahuila.
Mezcal.

For explanation of classification see index.

DIVISION VI

Forestry

Forestry Exhibit
Forestry Building

FORESTRY

THE exhibit presented by the Republic of Mexico in the Forestry Building is composed of the following articles: wood specimens, chewing gum, rubber, broom-root, indigo, gums, tanning barks, axe, *achiote*, and medicinal plants.

Among the wood specimens are found: mahogany, ebony, *primavera*, rose, cedar, oak, walnut, *mezquite*, Brazil, and other dyeing woods, beech, *granadillo*, chewing-gum tree, (*chico sapote*), pine, ocote, sabine, *tepehuaje*, ash, balsam, *capulin*, *chechen*, peach tree, *guayacán*, blackberry, lign-aloes, mulberry tree, *llorasangre*, laurel, juniper, and many others, making a total of three hundred and fifty-six different kinds of woods.

We regret not having been able to exhibit a complete collection of all the woods that are produced in Mexico, for it is a fact well known that one-fourth part of Mexico's territorial land, or say 496,800 square kilometres, is covered with numberless groves of trees, both on the plains and in dense forests.

Every year one cut, at least, is made in the few places where timber is worked, the annual production amounting to 1,428,047 tons with an approximate value of $9,906,321.

The following are the principal countries to which these woods are exported: Germany, Spain, United States, France, Holland, England, Italy, and Russia; 55,121 tons having been exported in one year, amounting to $3,469,000.

Chewing gum is one of the rich productions of Mexico. The production of chewing gum and cautchouc, samples of which are exhibited in this department, has caused great admiration among the visitors, because it demonstrates the wonderful fertility of the Mexican soil.

The States which produce these important articles, more than others, are: Campeche, Chiapas, Jalisco, Oaxaca, Puebla, Tabasco, Tepic, Veracruz, and Yucatan.

Owing to the small number of enterprises dealing in these valuable products, only 1,000 tons of chewing gum and 600 tons of cautchouc have been exported per annum.

Some 692 tons of chewing gum and 126 tons of cautchouc are exported to foreign countries every year.

Dyeing wood, indigo, axe, and achiote that are on exhibition in this department are also very valuable and grow abundantly; large quantities of them are also exported.

Broom-root (Zacaton). This plant is very useful for several purposes and grows in large quantities in Mexico.

Medicinal plants, as well as those for industrial purposes, take an interesting part in this exhibition, and are also much exported and valued by the public.

Division VI

Forestry

(Chief, Enrique H. Garibay)

GROUP XLVIII.

Commercial Exhibits

(*Forestry Products*)

Class 160

1. Ayuntamiento de Miacatlán, Morelos.
   Collection of woods.
2. Ayuntamiento de Tlaltizapán, Morelos.
   Collection of woods.
3. Barreto, Gregorio, Colima.
   Collection of woods.
4. Barron, Forbes y Cia, Tepic.
   Collection of woods.
5. Carpena, Gila A. de, Tepic.
   Collection of woods.
6. Compañía Colonizadora, Progreso, Yucatán.
   Collection of woods.
7. Compañía del Ferrocarril Sud Oriental, Mérida, Yucatán.
   Collection of woods.
8. Cortés, Remigio, Tlacotalpam, Veracruz.
   Collection of woods.
9. Fuentes, Primitivo, Tetecala, Morelos.
   Collection of woods.
10. González Gil, José, Cunduacán, Tabasco.
    Sample of wood.
11. González, Pedro, Cunduacán, Tabasco.
    Sample of wood.

For explanation of classification see index.

12. Gobierno del Estado de Aguascalientes, Aguascalientes.
Collection of woods.

13. Gobierno del Estado de Colima, Colima.
Collection of woods.

14. Gobierno del Estado de Puebla, Puebla.
Collection of woods.

15. Gobierno del Estado de San Luis Potosí, San Luis Potosí.
Collection of woods.

16. Gobierno del Estado de Tabasco, San Juan Bautista.
Collection of woods.

17. Gobierno del Territorio de Tepic, Tepic.
Collection of woods.

18. Gobierno del Estado de Veracruz, Xalapa.
Collection of woods.

19. Hernández, Gregorio, Cunduacán, Tabasco.
Sample of wood.

20. Merodio, Manuel, Cunduacán, Tabasco.
Collection of woods.

21. Romano y Cia, Macuspana, Tabasco.
Collection of woods.

22. Rosas, Perfecto, Amacuzac, Morelos.
Collection of woods.

23. Salazar, Mauro, Montemorelos, Nuevo León.
Collection of woods.

24. Santa Cruz, Francisco, Colima.
Collection of woods.

25. Secretaría de Fomento, México, D. F.
Collection of woods.

26. Solorzano, Salvador, México, D. F.
Collection of woods.

27. Solorzano y Sanz, José, México, D. F.
Collection of woods.

Class 162

28. Gobierno del Estado de Colima, Colima.
Collection of tanning barks.

29. Gobierno del Estado de Guerrero, Chilpancingo.
Collection of tanning barks.

30. Gobierno del Estado de Tabasco, San Juan Bautista.
Collection of tanning barks.

31. Martínez, J. M., Zimatlán, Oaxaca.
Collection of tanning barks.

32. Municipio de Jonacatepec, Morelos.
Collection of tanning barks.

33. Torres, E., Los Elotes, Morelos.
Collection of tanning barks.

34. Anciola, M., Inchamin, Michoacán. **Class 163**
Specimens of indigo.

35. Alvarez, M., Chiapa, Guerrero.
Specimens of indigo.

36. Barron, Forbes y Cia, Tepic.
Specimens of rubber.

37. Becerra Fabre, Belisario, Macuspana, Tabasco.
Specimens of achiote.

38. Camacho, I., Las Conchas, Chiapas.
Specimens of rubber.

39. Ceseña, E., México, D. F.
Specimens of damiana.

40. Compañía Colonizadora, Progreso, Yucatán.
Specimens of chewing gum.

41. Espinosa, J. M., La Libertad, Chiapas.
Specimens of indigo.

42. Fragoso, Nestor, Motozintla, Chiapas.
Specimens of gums.

43. Fuentes, P., Tetecala, Morelos.
Specimens of gums.

44. Gobierno del Estado de Colima, Colima.
Specimens of cascalote.

45. Gobierno del Estado de Chiapas, Tuxtla Gutierrez.
Specimens of rubber, resin, indigo, achiote, amolillo, and jaboncillo.

46. Gobierno del Estado de Guerrero, Chilpancingo.
Specimens of gums.

47. Gobierno del Estado de Michoacán, Morelia.
Specimens of axe.

For explanation of classification see index.

48. Gobierno del Estado de Tabasco, San Juan Bautista.
Specimens of achiote, chewing gum, resin, and rubber.

49. Municipio de Jonacatepec, Morelos.
Specimens of gums.

50. Muñoz Cano, F., Metztitlán, Hidalgo.
Achicuiliche skin.

51. Palacios, S., Motozintla, Chiapas.
Specimens of gums.

52. Pallas y Cia, Isla del Cármen, Campeche.
Specimens of chewing gum.

53. Parres de la Fuente, Juan, La Providencia, México.
Specimens of broom root.

54. Ramos Hermanos, México, D. F.
Specimens of chewing gum and rubber.

55. Robles, L., Sinacomitlán, Colima.
Specimens of chewing gum and rubber.

56. Rosado, Desiderio G., Comalcalco, Tabasco.
Specimens of Jaboncillo.

57. Secretaría de Fomento, México, D. F.
Specimens of gums, medicinal plants, and chewing gum.

58. Vargas, F. S., Chila, Tepic.
Specimens of chewing gum.

59. Vázquez, Pablo, Tlaltenango, Morelos.
Mezquite gum.

For explanation of classification see index.

DIVISION VIII

Mines and Metallurgy

Mines and Liberal Arts Exhibit

Mines and Metallurgy

AS far as mining is concerned, Mexico may be considered the richest country in the world, because it is acknowledged that almost all its mountains are of metalliferous character, and it is estimated that not more than one-tenth of its mineral wealth has yet been developed. The richest region in mineral deposits is found in the western range of mountains which extends from the State of Oaxaca to that of Sonora for a distance of 2,560 kilometres, bound from N. W. to S. E.

The principal mining districts of the Republic, and the states to which they belong respectively, are the following:

Pachuca, State of Hidalgo.
Guanajuato, State of Guanajuato.
Zacatecas, State of Zacatecas.
Catorce, State of San Luis Potosí.
Zaculpan, State of México.
Chihuahua and Batopilas, State of Chihuahua.
Topia and Mapimí, State of Durango.
Sierra Mojada, State of Coahuila.
El Triunfo y Santa Rosalía, Territory of Baja California (Lower California).
Peras, State of Oaxaca.

There are many others of importance, impossible to mention here, and situated in the States of Oaxaca, Sonora, Nuevo León, Aguascalientes, etc.

The mining districts of Guanajuato, Zacatecas, and Catorce, situated in the center of the Republic comprise an extension of 33,000 square kilometres. These figure are enough to give an idea of the total area comprised in the districts before mentioned.

The mining production of the country in 1884 amounted to $43,200,000, it increased to $65,129,840 in 1889, and in the fiscal year 1899 to 1900 reached the sum of $93,069,027, but adding the sum of $10,142,285, which is the difference between the price of gold at 675\frac{416}{}$ per kilo and its commercial price, the sum of $103,211,312 is the value in Mexican dollars of the mineral production of the country.

Regarding non-metallic minerals, the approximate production is estimated to be $25,000,000, so that the total production amounts to $128,211,312.

In calculating this amount, the proportion of lead and copper, as well as the precious metals, is as follows:

	KILOS	GRAMS
Gold,	13,776	475
Silver,	1,714,448	470
Copper,	28,300 tons.	
Lead,	63,950 "	

Silver is the principal factor of the mining production of the country. Gold is found mixed with the white metal or free, in the States of Oaxaca, Chihuahua, Batopilas, Sonora, Guerrero, and Durango. The richest veins are found in the coast of the Pacific and in Lower California.

The auriferous region covers the western side of Sierra Madre and Sonora, and at the south it is as rich as portions of California, Alaska, and South Africa. Mexico will gradually become very important in the production of the yellow metal. Explorations are made daily with success, and many new deposits are being discovered.

Copper is being developed with great rapidity. Last year, this production amounted to $10,000,000, and we might say that this sum will be doubled as soon as the abundant deposits discovered in Sonora begin to be developed.

The Compañía Minera del Boleo, situated in Santa Rosalía, Baja California, has begun to exploit antimony, quicksilver, sulphur, etc., and considerable and important progress is being made in that line.

Iron is very abundant in Mexico. It is enough to mention the important deposit, called Cerro del Mercado, in the State of Durango. It is 4,800 feet long, 1,100 broad, and 640 high. The mineral contains 70 per cent of iron, and more than $300,000,000 can be extracted from that region.

Large reduction works have been established in Monterrey, San Luis Potosí, Aguascalientes, etc., and many others are also to be erected for the treatment of the above mentioned minerals.

Several kinds of stone for building purposes are being quarried. The Mexican onyx, so beautiful for ornamental purposes, is also being exploited in Mexico and every day its production reaches greater proportions.

The Mexican exhibit in mines at the Pan-American Exposition is intended to show the various mining products of the Republic which are attracting the attention of the world's great mining enterprises.

Division VIII

Mines and Metallurgy

(Chief, Engineer Juan D. Fleury)

GROUP LIV

Mineral Collections

Class 187

1. Aguilar, Francisco, Ures, Sonora.
   Gold and silver ores.
2. Ahumada, Miguel, Chihuahua, Chihuahua.
   Silver ores.
3. Anaya, Andrés, Monterrey, Nuevo León.
   Lead and silver ores.
4. Ayuntamiento de C. Guerrero, Tamaulipas.
   Silver ores.
5. Bikerton, J. E., Moctezuma, Sonora.
   Silver ores.
6. Blanco, Angel, Sultepec, México.
   Silver ores.
7. Comisión de Exposición de San Luis Potosí, San Luis Potosí.
   Mineral collection.
8. Compañía del Real del Monte y Pachuca, Pachuca, Hidalgo.
   Mineral collection.
9. Compañía Francesa Minera de San Pedro, Altar, Sonora.
   Silver ores.
10. Compañía Minera "Cruz y Anexas," México, D. F.
    Native sulphur and quick silver ores.
11. Compañía Minera de Baján, Monterrey, Nuevo León.
    Silver ores.

12. Compañía Minera de Buena Vista, Monterrey, Nuevo León.
Copper and silver ores.

13. Compañía Minera del Boleo, Santa Rosalía, Baja California.
Copper ores.

14. Compañía Minera de Pánuco, Mazatlán, Sinaloa.
Collection of silver ores.

15. Compañía Minera de Peñoles, Mapimí, Durango.
Lead and silver ores.

16. Compañía Minera de San Rafael y Anexas, Zacatecas.
Silver ores.

17. Compañía Minera Fundidora y Afinadora de Monterrey, Monterrey, Nuevo León.
Lead and silver ores.

18. Compañía Minera "La Castellana y San Ramón" Ahuacatlán, Tepic.
Silver ores.

19. Compañía Minera, "La Fraternal," S. A. Lampazos, Nuevo León.
Lead and zinc ores.

20. Compañía Minera, Lampazos, Nuevo León.
Silver ores.

21. Compañía Minera "La Palma," Sombrerete, Zacatecas.
Gold and silver ores.

22. Creel, Enrique, Chihuahua.
Silver ores.

23. Creston Colorado Mining Co., The, Hermosillo, Sonora.
Lead, gold, and silver ores.

24. Cruz, Rafael, Chihuahua.
Silver ores.

25. Chiapas Mining Co., The, Pichucalco, Chiapas.
Copper and silver ores.

26. Detroit Mexican Company, Sultepec, México.
Silver ores.

27. Dos Cabezas Mining Co., The, Moctezuma, Sonora.
Gold and silver ores.

For explanation of classification see index.

28. Dura Mill and Mining Co., La, Alamos, Sonora.
Silver ores.

29. Durazo, Venancio, Lampazos, Nuevo León.
Silver ores.

30. Flores, Francisco, Arizpe, Sonora.
Lead and silver ores.

31. Flores, Gabriel, Sierra Mojada, Coahuila.
Lead and silver ores.

32. Galván, Serapio, Guadalupe, Zacatecas.
Lead and silver ores.

33. García, Francisco H., Tacubaya, D. F.
Silver ores.

34. García, Lucas R., Lampazos, Nuevo León.
Silver ores.

35. García, Trinidad, México, D. F.
Silver ore collection.

36. Gobierno del Estado de Aguascalientes, Aguascalientes.
Copper and silver ores.

37. Gobierno del Estado de Chihuahua, Chihuahua.
Copper, lead, and silver ores.

38. Gobierno del Estado de Durango, Durango.
Mineral ore collection.

39. Gobierno del Estado de Guanajuato, Guanajuato.
Mineral collection.

40. Gobierno del Estado de México, Toluca.
Silver ores.

41. Gobierno del Estado de Sinaloa, Culiacán.
Silver ore collection.

42. Gobierno del Estado de Zacatecas, Zacatecas.
Lead and silver ores.

43. Gómez, Francisco, Hidalgo del Parral, Chihuahua.
Silver ores.

44. Gran Fundición Central Mexicana de Aguascalientes, Aguascalientes.
Copper and silver ores.

45. Gregg, W., Moctezuma, Sonora.
Copper ores.

For explanation of classification see index.

46. Heniart, Aurelio, Charcas, San Luis Potosí.
Antimonial ores.

47. Honey, Ricardo, México, D. F.
Iron ores.

48. Hoyos, Antonio, Moctezuma, Sonora.
Silver ores.

49. Ibarra, Jesús I., Pinos, Zacatecas.
Silver ores.

50. King, J. K. M., Moctezuma, Sonora.
Silver ores.

51. Lejeune, Fernando, Minillas, Zacatecas.
Lead and silver ores.

52. Maíz, Joaquín, Monterrey, Nuevo León.
Lead and silver ores.

53. Martínez Baca, Eduardo, México, D. F.
Mineral collection.

54. Mazapil Copper Company, Concepción del Oro, Zacatecas.
Silver ores.

55. Mendoza, Presbitero, Guanajuato.
Mineral collection.

56. Mexican Gold and Silver Recovery Co., The, Hermosillo, Sonora.
Gold and silver ores.

57. Mezquital Mining Co., Mezquital del Oro, Zacatecas.
Gold and silver ores.

58. Moctezuma Copper Co., The, Lampazos, Nuevo León.
Silver ores.

59. Moctezuma Copper Mine, Moctezuma, Sonora.
Gold, silver, and copper ores.

60. Moreneau, Francisco, Altar, Sonora.
Silver ores.

61. Muñóz de la Cámara, Enrique, México, D. F.
Mineral collection.

62. Negociación de Candelaria y Anexas, Pinos, Zacatecas.
Gold and silver ores.

63. Negociación de Sauceda, Zacatecas.
Collection of silver ores.

For explanation of classification see index.

64. Negociación Minera del Progreso. Triunfo, Baja California.
Gold and silver ores.

65. Negociación Minera de Santa María de Guadalupe, Guadalupe, Zacatecas.
Lead and silver ores.

66. Negociación Minera Restauradora Purisima y Anexas, Pinos, Zacatecas.
Quicksilver ores.

67. Orinzky, Leonardo, Baja California.
Silver ores.

68. Ortega, Diego L., Arizpe, Sonora.
Silver ores.

69. Ortega, Diego M., Altar, Sonora.
Silver ores.

70. Pedazini, Juan, Arizpe, Sonora.
Silver ores.

71. Pereira, Manuel, Moctezuma, Sonora.
Silver ores.

72. Pereira, P., Lampazos, Nuevo León.
Silver ores.

73. Robinson, W. H. y Socios, Oaxaca.
Lead ores.

74. Rule, Francisco, Pachuca, Hidalgo.
Silver ore collection.

75. San Carlos Copper Co., San José de Tamaulipas, Tamaulipas.
Copper ore collection.

76. Sánchez, Domingo, Cuernavaca, Morelos.
Silver ores.

77. Santa Rosalía Mining Co., The, Arizpe, Sonora.
Silver ores.

78. Sellerier, Carlos, México, D. F.
Metallic ore collection.

79. Smith, J. E., Moctezuma, Sonora.
Silver ores.

80. Sombrerete Mining Co., Sombrerete, Zacatecas.
Metallic ore collection.

For explanation of classification see index.

81. Torres, F., San Luis Potosí.
Silver ores.

82. Vallejo, Loreto M., Ahuacatlán, Tepic.
Silver ores and photographs of Ceboruco volcano.

GROUP LV

Mining Machinery, Tools and Appliances

Class 195

83. Gran Fundición Central de Aguascalientes, Aguascalientes.
Map and products of the foundry.

GROUP LVIII

Machinery, Tools and Appliances Used in Moving, Delivering and Storing Ores and Coal

Class 201

84. Compañía de Fundición de Fierro y Manufacturera de Monterrey, Nuevo León.
Mining cart.

GROUP LIX

Ores and Metallic Products

Class 203

85. Fundición de Sinaloa, Mazatlán, Sinaloa.
Photographs of the foundry.

GROUP LX

Non-metallic Mineral Products

86. Compañía Mexicana de Cal Hidráulica, Cemento y Materiales de Construcción, S. A., México, D. F. — **Class 210**
Building materials.

87. Gobierno del Estado de Morelos, Cuernavaca.
Limestone.

88. Municipalidad de Tepeji del Rio, Atotonilco, Hidalgo.
Limestone.

89. Gobierno del Estado de Morelos, Cuernavaca. — **Class 212**
Clays.

90. Rosas, Vicente, Yautepec, Morelos.
Clays and kaolin.

91. Compañía del Real del Monte y Pachuca, Pachuca, Hidalgo. — **Class 213**
Salts.

92. Gobierno del Estado de Durango, Durango.
Native sulphur.

GROUP LXI

Mineral Combustibles

93. Compañía Carbonífera de Fuente, Fuente, Coahuila. — **Class 214**
Coal specimens.

94. Compañía de Carbón de Coahuila "El Hondo" Sabinas, Coahuila.
Coal specimens.

95. Dura Mill and Mining Co., La, Hermosillo, Sonora.
Anthracite and natural coke.

GROUP LXII

Quarry Products

96. Anaya, Andrés, Monterrey, Nuevo León. — **Class 218**
Marbles.

97. Municipalidad de Tepeji del Rio, Atotonilco, Hidalgo.
Marbles.

98. Santa Cruz Francisco, Colima.
Marbles.

Class 219

99. Cárdenas Amador, Jimulco, Coahuila.
Mexican onyx.

100. Gobierno del Estado de Durango, Durango.
Mexican onyx.

101. Gobierno del Estado de Morelos, Cuernavaca.
Granite limestone.

102. Olimán, Manuel, Puebla.
Mexican onyx.

Class 220

103. Ayuntamiento de C. Guerrero, Tamaulipas.
Building stone.

104. Compañía del Real del Monte y Pachuca, Pachauca, Hidalgo.
Building stone.

105. Gobierno del Estado de Durango, Durango.
Building stone.

106. Gobierno del Estado de Guanajuato, Guanajuato.
Building stone.

107. Gobierno del Estado de México, Toluca.
Building stone.

108. Gobierno del Estado de Morelos, Cuernavaca.
Building stone.

109. Hacienda de Ibarrola, Guanajuato.
Building stone.

110. Hacienda de Los Otates, Guanajuato.
Building stone.

111. Hacienda de San José de la Palma, Guanajuato.
Building stone.

112. Rancho de San Sebastián, Coahuila.
Building stone.

113. Santa Cruz Francisco, Colima.
Building stone.

For explanation of classification see index.

GROUP LXIII

Literature and Statistics

Class 221

114. Compañía del Real del Monte y Pachuca, Pachuca, Hidalgo.
Photographic mining views and maps.

115. Compañía Minera del Boleo, Santa Rosalía, Baja California.
Photographic mining and foundry views, and statistical mining maps.

116. International Mining Co., Nieves, Zacatecas.
Photographic mining views.

118. Rule Francisco, Pachuca, Hidalgo.
Mining maps.

119. Sellerier, Carlos, México, D. F.
Data referring to Mexican mining.

DIVISION X

Electricity and Electric Appliances

Division X

Electricity and Electric Appliances

(Chief, Engineer Juan D. Fleury)

GROUP LXXV

Electric Lighting

1. Compañía Mexicana de Electricidad S. A., México, D. F. **Classes 284-287**
   Photographs of different installations of public lighting in the City of México.
2. Dirección General de Telégrafos Federales, México, D. F. **Classes 288-290**
   Telegraph accessories, insolators, tools, regulations, and various publications.
3. Jaspeado, Ruperto, Texcoco, México, D. F.
   Insolators.

GROUP LXXVI

Telegraphy and Telephony

4. Noriega y Ruiz, Eloy, México, D. F. **Class 291**
   Telephones and microtelephones.
5. Reyes, L., San Luis Potosí,
   Telephone.

For explanation of classification see index.

Machinery and Apparatus for Generating and Using Electricity

Class 296

6. Compañía de San Ildefonso, México, D. F.
   Photographs of installation of apparatus employed for the transmission of electric power.

7. Compañía Eléctrica é Irrigadora en el Estado de Hidalgo, S. A., México, D. F.
   Photographs of the irrigation works and for the transmission of electic power.

Class 299

8. Compañía de San Ildefonso, México, D. F.
   Photographs of the electric motors employed for the motion of apparatus used in the manufacture of cassimeres.

9. Compañía Eléctrica é Irrigadora en el Estado de Hidalgo, S. A., México, D. F.
   Photographs of installations for electric power transmission to run the water pumps in the mine of "La Dificultad" of Real del Monte, Hidalgo, and of the Mills called "Chilenos" employed in the milling of mineral in the "Hacienda de Beneficio of Guadalupe."

DIVISION XI

Transportation

TRANSPORTATION

GREAT progress has been attained in Mexico within the last few years in the various branches of transportation.

In order to obtain a comprehensive idea of the improvements and great development in the Mexican Postal Service, it suffices to examine the exhibit which the Mexican Post-Office Department presents at the Pan-American Exposition, as well as the following statement with the official information relating to the subject:

General Mail Traffic from 1899 to 1900.

CLASS	INTERIOR SERVICE	FOREIGN SERVICE			TOTAL
		Forward'd	Received	Amount	
Letters and business cards.....	28,089,133	4,134,716	3,937,297	8,072,013	36,161,146
Postal cards with and without reply	583,572	104,328	124,640	228,968	812,540
Printed matter in general.....	69,473,352	3,424,722	28,110,418	25,535,140	95,008,492
Samples without value.....	551,308	162,764	380,414	543,178	1,094,486
Parcel post packages.....	199,120	21,214	134,243	155,457	354,577
Registered matter.....	810,841	141,817	247,110	388,927	1,199,768

Number of Post-Offices up to June 30th, 1901.

General post offices.....	539
Branches.....	22
Permanent agencies.....	1,315
Traveling agencies.....	96

Length of postal routes..... 91,048 kilometers.
Distance covered in the year 1900.....31,377,487 "

Division XI

Transportation

Railways, Vehicles, Vessels

(Chief, Engineer Carlos Sellerier)

Vehicles

GROUP LXXXII

Wheeled Vehicles for Horse Power

1. Gobierno del Estado de México, Toluca. **Class 328**
   Silvered and embroidered saddle.
2. Leyarish, José, León, Guanajuato.
   Saddles.
3. Limón, Raimundo, Tulancingo, Hidalgo.
   Embroidered saddle.
4. Vent, Andrés, México, D. F.
   Mail coach model.

GROUP LXXXVII

History and Literature

5. Administración General de Correos, México, D. F. **Class 352**
   Laws, statistics, scales, books, postal conventions, models, etc.

For explanation of classification see index.

DIVISION XII

Ordnance and Munitions of War

Division XII

Ordnance and Munitions of War

(Chief, Lieutenant-Colonel Enrique Mondragón)

GROUP LXXXVIII

Ordnance

1. Fábrica Nacional de Pólvora, México, D. F. **Class 355**
   Samples of modern explosives.
2. Mondragón, Teniente Coronel Enrique, México, D. F.
   Double effect fuses.

GROUP XCIV

History and Literature

3. Mondragón, Teniente Coronel Enrique, México, D. F. **Class 379**
   Synthetic and analytic report of modern explosives.

DIVISION XIII

Manufactures

Front View of Manufactures Exhibit

Manufactures and Liberal Arts Building

Mexico at the Pan-American Exposition

MANUFACTURES

THROUGH her participation in previous International Expositions, the Republic of Mexico has already won the reputation, which in justice belongs to her, of having inexhaustable natural resources, and of being capable of offering, as a producer of the most varied raw materials, extensive fields for the investment of European or North American capital.

Ten years ago the Republic entered upon an era of industrial prosperity, owing principally to the permanent peace that the country has enjoyed; to the numerous railroad lines that traverse the entire territory; to the tremendous crisis of the depreciation of silver; to franchises and exemption from taxes for capital invested in new industries; and, finally, to liberal concessions granted by the Government for the utilization of public waters as a motive power. The economical phenomenon of the depreciation of silver has been the principal and demonstrative factor of her industrial development.

Mexico has to-day large factories for the manufacture of cotton fabrics, in which are utilized the excellent raw materials that are grown in the country, though the production is yet very far from being sufficient for the consumption.

The national production of wool manufactures is still very small, notwithstanding that there are several modern factories in the country

for the manufacture of woolen goods of a superior quality, as will be seen by the samples in the Mexican exhibit.

The silk industry is being placed on a very solid basis, and manufactured articles from Mexican silks can be seen on exhibition.

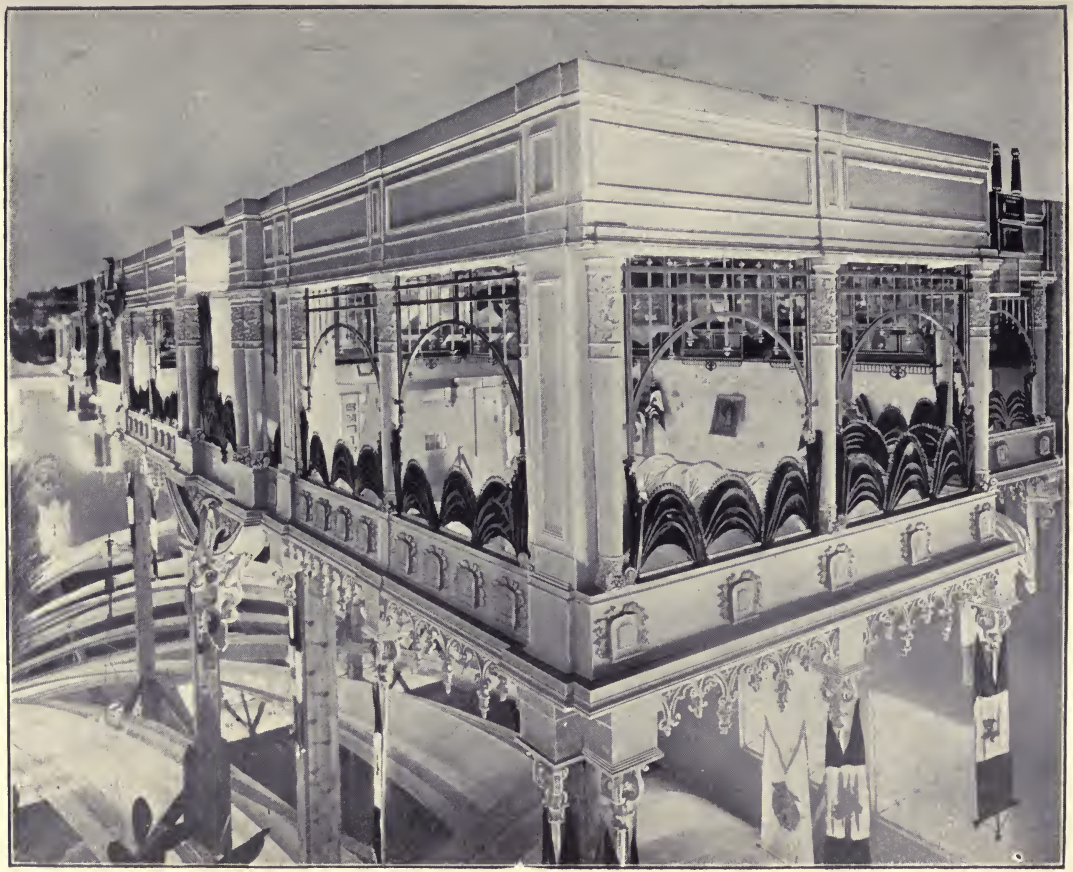
The jute industry in manufactured products is gaining more importance every day. Nearly 2,000,000 Mexican dollars worth of jute goods were exported last year, such as cordage, ropes, sacks, etc. Exports of leaf jute, as raw material, reached the sum of $53,000,000.

Leaf "ixtle" exports amounted to $3,000,000.

The first large steel plant in the country is being constructed for the manufacture of knives, needles, scissors, etc., with a capital subscribed principally by Mexicans.

Ceramic goods that are on exhibition in the Division of Manufactures are demonstrative of the artistic progress attained by Mexico in that line.

Really interesting, curious, original, and worthy of attention is the exhibition of fine and delicate works performed by Mexican ladies, who compete among themselves to exhibit works of refined and artistic taste in each new exposition that is held.



GROUP XCVII

Soaps, Essences and Perfumery, Toilet Articles

Class 387

13. Moebius, Guido, Monterrey, Nuevo León.
Soaps.

Class 388

14. Moebius, Guido, Monterrey, Nuevo León.
Perfumes.

Class 389

15. Aizpuru, Alberto, México, D. F.
"Championnere elixir." "Dr. U. Pazot's" tooth powder.

16. Avila, Anselmo, é Hijo, México, D. F.
"Aliva" paste and tooth powder.

17. Penitenciaría del Estado de Nuevo León, Monterrey.
Comb.

GROUP XCVIII

Traveling, Camping, and Sporting Apparatus

Class 391

18. Leyarish, José, León, Guanajuato.
Leather goods.

GROUP XCIX

Furniture and Interior Decorations

Class 394

19. Ayuntamiento de Tequixquiapan, Querétaro.
Birch furniture.

20. Mestas, Anastasio, México, D. F.
Brass beds.

21. Navarro, Juan, México, D. F.
Brass bed.

Interior View of Manufactures Exhibit

Manufactures and Liberal Arts Building

22. Salas Herrero, Ismaél, San Luís Potosí.
Wooden furniture.

23. Von Gehren, Edmundo, Zacatecas.
Birch furniture.

24. Zavala, Francisco, Puebla.
Children's chairs.

25. Tolsa, Manuel C., Guadalupe Hidalgo, D. F. **Class 395**
Mexican onyx goods.

GROUP C

Carvings and Art Metal Work

26. Carandente, Tartaglio T., Tacubaya, D. F. **Class 400**
Bronze statue.

27. Junta Local de Puebla, Puebla.
Bust in bronze.

GROUP CI

Ceramics and Allied Products

28. Guiard, Enrique, Zirisícuaro, Michoacán. **Class 402**
Ceramic goods.

29. Ibarra, Felipe, Mérida, Yucatán. **Class 404**
Tiles.

GROUP CII

Glass and Glass Ware

30. Coeto, Manuel, Puebla. **Class 405**
Colored glass.

For explanation of classification see index.

GROUP CIV

Heating, Cooking, and Washing Apparatus and Kitchen Appliances

Class 412

31. Holck, C., y Compañía, Monterrey, Nuevo León.
Matches.

32. Moebius, Guido, Monterrey, Nuevo León.
Matches, stearine candles.

GROUP CVIII

Jute, Ramie, and other Vegetable and Mineral Fabrics. Fabrics of Glass

Class 427

33. Gobierno del Estado de Yucatán, Mérida.
Sisal hemp hammock.

34. Industrial, La Sociedad Anónima, Mérida, Yucatán.
Jarcia manufactures, hemp balls, hemp ropes, hammock and hemp thread.

35. Ramírez, José G., Villa Alta, Oaxaca.
Pita hammock.

Class 429

36. Nieto, José de Jesús, é Hijo, Puebla.
Samples of gold and silver trimmings.

37. "Santa Gertrudis," Compañía Limitada Manufacturera de Yute, Orizaba, Veracruz.
Samples of jute goods.

GROUP CXI

Woolens, Cottons, Linens, Silks, Furs, and Millinery. Toys and Barbers' Supplies

Class 441

38. Barragán, Sebastián, Santa Ana Chiautempan, Tlaxcala.
Woolen *zarapes* made in old style hand looms.

39. Concordia, La, Fábrica, Chihuahua.
Blankets, cassimeres.

40. Cornú, Pedro, Aguascalientes.
Cassimeres.

41. García, Martín, Tulancingo, Hidalgo.
Woolen and cotton goods.

42. Gobierno del Estado de Durango, Durango.
Cassimeres.

43. Gobierno del Estado de Zacatecas, Zacatecas.
Woolen *zarapes*.

44. González, Eusebio, Guanajuato.
Cassimeres.

45. Juambelz Sucesores, Mapimí, Durango.
Woolen *zarapes*, cassimeres.

46. León, Juán, Texcoco, México.
Cassimere.

47. Maiz Hermanos, Monterrey, Nuevo León.
Hats.

48. Reyes Durón, Manuel, Aguascalientes.
Cassimeres, blankets, and woolen goods.

49. "San Idelfonso," Fábrica de Tejidos de Lana, Sociedad Anónima, Tlanepantla, México.
Woolen goods.

50. Suárez, Eduardo, Texcoco, México.
Woolen *zarapes*.

51. Zolly Hermanos, Sucesores, México, D. F.
Hats.

52. Bueno Barroso Arias, L., Tajimaroa, Michoacán. **Class 442**
Unbleached cotton.

53. Compañía Industrial de Orizaba, Veracruz.
Thread, cotton goods.

54. García, Martín, Tulancingo, Hidalgo.
Printed cotton goods.

55. Gobierno del Estado de Zacatecas, Zacatecas.
Mexican shawls (*rebozos*).

56. Guerrero, é Hijos, Ignacio, San Luís, San Luís Potosí.
Mexican shawls (*rebozos*).

For explanation of classification see index.

57. Ollivier, D., y Compañía, Fábricas de Rio Hondo, Tlanepantla, México.
Percale handkerchiefs, stamped percale.

58. Pliego Hermanos, Toluca, México.
Cotton fabrics.

59. Rivero Sucesores, Valentín, Monterrey, Nuevo León.
Cotton goods.

60. "Saint Manuel River Fall," Fábrica, San Manuel, Tlaxcala.
Cotton goods.

61. Santos, Rafael, Zacatlán, Puebla.
Mexican shawls (*rebozos*).

62. Zorrilla, J., y Compañía, Oaxaca.
Cotton fabric.

Class 444

63. Chambon, Hipólito, México, D. F.
Samples of Mexican silks, Mexican silk shawls (*rebozos*).

64. Jaspeado, Ruperto, Texcoco, México.
Silk fabric.

65. Ollivier, D., y Compañía, Tlanepantla, México.
Silk handkerchiefs.

66. Vázquez, Mónica, Valle de Bravo, México.
Skein of silk.

Class 445

67. Gobierno del Estado de Durango, Durango.
Carpets.

68. "San Ildelfonso," Fábrica de Tejidos de Lana, Sociedad Anónima, Tlanepantla, México.
Carpets and mats.

69. Stiker y Hermanos, Valentín, Aguascalientes.
Carpets.

Class 447

70. Aboitis, Manuel, Salamanca, Guanajuato.
Gloves.

71. Avilés, Manuel, Salamanca, Guanajuato.
Gloves.

72. Castaños, Guadalupe, Mazatlán, Sinaloa.
Embroidered child's dress.

73. Jacques, S. & J., Celaya, Guanajuato.
Undershirts.

Interior View of Manufactures Exhibit

74. Paz, La, Gran Fábrica de Ropa, Sociedad Anónima, Chihuahua.
Charro dress, riding trousers, canvas trousers.

75. Rivero, Sucesores, Valentín, Monterrery, Nuevo León. **Class 448**
Knit goods.

76. Marnat, Paul, México, D. F. **Class 449**
Cuffs, collars, and shirts for men.

77. Paz, La, Gran Fábrica de Ropa, Sociedad Anónima, Chihuahua.
Men's shirts.

78. Penitenciaría del Estado de Nuevo León, Monterrey.
Collars.

79. Aguilar, Angela, Pachuca, Hidalgo. **Class 450**
Embroidered screen.

80. Ariza, A., Teoloyucán, México.
Cushion.

81. Barragán, María, Zacatecas.
Embroidered handkerchief.

82. Burgos, Señoritas, Querétaro.
Embroidered handkerchiefs.

83. Carrillo, Francisca, Guanajuato.
Embroidered handkerchiefs, cushion cover.

84. Colegio de Santa Teresa, Toluca, México.
Embroidered work.

85. Charles, Herminia, Saltillo, Coahuila.
Drawn linen work.

86. Domínguez, Sinforiano, Comitán, Chiapas.
Cotton bed cover.

87. Fernández, Juana, Zacatecas.
Silk foot cover.

88. Fleury, Enriqueta E. de, México, D. F.
Silk embroideries.

89. Galván de Lostres, Josefa, México, D. F.
Corsets.

90. García, María, México, D. F.
Embroidered screen.

For explanation of classification see index.

91. Garza, Viuda de Caso, Juana de la, Ciudad Guerrero, Tamaulipas.
Counterpane.

92. Garza, Lorenza de la, Ciudad Victoria, Tamaulipas.
Embroidered silk quilt.

93. Gómez, Rita, Colima.
Napkin.

94. Hinojosa, Josefina, México, D. F.
Embroidered screen.

95. Hug, Rodolfo, León, Guanajuato.
Drawn linen work.

96. Hurtado, María, Zacatecas.
Embroidered foot cover.

97. Isla, Aurelia, Zacatecas.
Embroidered handkerchief.

98. Journel, María, Zacatecas.
Bureau cover.

99. Junta de Señoras, Cuernavaca, Morelos.
Pillow-case, embroidered quilt.

100. Junta Local de Puebla, Puebla.
Small embroidered hat.

101. "La Paz," Gran Fábrica de Ropa, Sociedad Anónima, Chihuahua.
Padded counterpane.

102. Lión, Eugenia, Aguascalientes.
Drawn linen work.

103. López, Felipa, Mocorito, Sinaloa.
Cushion cover.

104. Lucarra, Emilia, Hermosillo, Sonora.
Drawn linen work.

105. Llerena, Tecla, Colima.
Napkin.

106. Morentín, Paula, Colima.
Napkin.

107. Morgado, María, Zacatecas.
Sachet.

108. Nuncio, Gertrudis, México, D. F.
Embroidered screen, drawn linen work.

109. Nuncio, Otilia, México, D. F.
Drawn linen work.

110. Ontiveros, Piedad, Guanajuato.
Lace table cloth.

111. Penitenciaría del Estado de Nuevo León, Monterrey.
Baskets, purses.

112. Ramos, Concepción, Oaxaca.
Embroidered cushion.

113. Reyes, Cármen, Puebla.
Silk embroidery.

114. Robledo, Eulalia, Mocorito, Sinaloa,
Embroidered cushion, hook-weaved napkin.

115. Sánchez, Cármen, Tuxtla Gutiérrez, Chiapas.
Weaving hook.

116. Silva de Guitiérrez, Otilia, Aguascalientes.
Drawn linen work.

117. Villada de la Peña, Guadalupe, Toluca, México.
Embroidery.

118. Ramos, Evaristo, Morelia, Michoacán.
Shoes.

119. Zenizo, Cristobal, Puebla.
Shoes.

GROUP CXIV

Scales, Weights, and Measures

120. Acosta, Simón, Tulancingo, Hidalgo. **Class 462**
Scale.

121. Guevara, Petronilo, Guanajuato.
Scale.

GROUP CXVII

Miscellaneous Articles

Class 474

122. Elle, Paul, México, D. F.
Tailor's division square.

123. Rivera, Mauricio, México, D. F.
Shoe lasts.

GROUP CXVII—A

Cigars and Cigarettes

Cigars and cigarettes were omitted from the official classification, and grouping and classification [Group CXVII—A and Class 474—A] are merely for convenience of reference.

Class 474—A

124. Alarcón, Filiberto, Huazalingo, Hidalgo.
Cigars.

125. Arriaga, Joaquín, Morelia, Michoacán.
Cigarettes.

126. Balsa Hermanos, Veracruz.
Cigars.

127. Casas, D., San Juan Bautista, Tabasco.
Cigars.

128. Compañía Cigarrera Mexicana, México, D. F.
Cigars and cigarettes.

129. Delius y Compañía, Ixtapa Concepción, Tepic.
Cigars.

130. Evía, José María, Campeche.
Cigarettes.

131. Fletes, Amado, Tepic.
Cigars.

132. García, Estéban, Colima.
Cigars.

133. González Hermanos, San Juan Bautista, Tabasco.
Cigars.

Interior of Manufactures Exhibit

134. González Villaseñor y Compañía, Tepic.
Cigars.

135. Grajales, Gregorio, Mérida, Yucatán.
Cigars and cigarettes.

136. Lanzagorta, Hermanos, San Blas, Tepic.
Cigars.

137. Madrazo y Corrales, Veracruz.
Cigars.

138. Moreno, Rómulo, Valle de Santiago, Guanajuato.
Cigarettes.

139. Morfín, Antonio, Aguascalientes.
Cigars and cigarettes.

140. Pérez Reguera, Luis, Oaxaca.
Cigarettes.

141. Robles, Francisco, Colima.
Cigars.

142. Rodríguez Sámano, Francisco, Morelia, Michoacán,
Cigarettes.

143. Vázquez, Cipriano, Mazatlán, Sinaloa.
Cigars.

144. Villa Hermanos, Sucesores, Orizaba, Veracruz.
Cigarettes.

For explanation of classification see index.

DIVISION XIV

Graphic Arts

Division XIV

Graphic Arts

(Chief, Maximiliano M. Chabert)

GROUP CXVIII

Materials for Printing, Engraving, and Bookbinding

1. Municipalidad de Tepéji del Río, Atotonilco, Hidalgo. **Class 481**
   Lithographic stone.

GROUP CXX

Results in Printing, Engraving, and Bookbinding

2. Aguirre, Eduardo, Guanajuato. **Class 496**
   Specimens of typographic work.
3. Comisión Geográfico Exploradora, Xalapa, Veracruz. **Class 497**
   Lithographic maps.
4. Iguinis, José M., Guadalajara, Jalisco.
   Samples of lithographs.
5. Sandoval, Rosendo, México, D. F.
   Lithography in colors.
6. Aguirre, Eduardo, Guanajuato. **Class 498**
   Specimens of photo-engraving.
7. Ancira y Hermano, Guadalajara, Jalisco. **Class 500**
   Samples of typography.

For explanation of classification see index.

8. Tipografía de la Secretaría de Fomento, México, D. F.
Samples of printed works.

Class 501

9. Kaiser, Juan, San Luis Potosí.
Binding samples.

10. Pérez y Navarro, México, D. F.
Binding samples.

DIVISION XV

Liberal Arts

Mines and Liberal Arts Exhibit

LIBERAL ARTS

AMONG the exhibits in the Division of Liberal Arts, the most important ones are the official exhibits of the Mexican Government, because they are illustrative of all the branches of public instruction in Mexico, from primary schools up to the most scientific institutions devoted to special courses of studies, comprising also several exhibits from some of the executive departments of the Mexican Government.

The development that has been attained in Mexico, due to the efforts of that progressive and patriotic statesman, General Porfirio Díaz, is not confined to her material progress alone, but it takes in the intellectual development as well.

Although much of the Government's attention has been directed towards obviating the difficulties encountered in extending the railroad system throughout Mexico, granting full franchises for the development of her industries, and doing everything possible for the promotion of commerce, nevertheless, the important obligation of educating the people has not been forgotten, by the establishment of schools even in the most remote places of the country.

By the initiative of the president of the Republic, the National Congress approved a law June 3d, 1896, making primary instruction compulsory, gratuitous, and non-sectarian for children of both sexes between the ages of six

and twelve. Higher, as well as professional, instruction is voluntary, all of them being supported by the government.

The latest official statistics for 1899, show that there were at that time 11,925 public schools in the Republic, not including those of any of the states which unfortunately could not send in their reports on time.

Eight scientific institutions of those that are supported by the federal government, are represented in this division, and, in addition, three of a private character.

As the catalogue for this division contains detailed information concerning the organization, work, and results obtained by the former, we do not deem it necessary to enter here into further explanation regarding them. However, it is essential to note, that the Commission on Parasitology, which is also represented in this division, is of very recent organization and its contingent is, therefore, not so varied and extensive as those of other institutions.

This commission was organized in 1900, with a view to studying the plagues that are so injurious to agriculture, and has not had sufficient time to prepare its extensive exhibit for this first exposition in which it takes part.

An interesting collection of photographs is exhibited by the management of the mint at the City of Mexico of its different workshops, where the most modern and perfected machinery is employed in coining money.

Scientific and literary societies have con-

tributed much towards the intellectual development of the country. Although there are forty different societies of this kind in the Republic, each one of them with a well selected library on matters pertaining to that particular branch of study to which they are devoted, only three of them, however, are represented at this exposition.

The Bureau of Statistics is charged with the duty of collecting and publishing in various volumes each year the statistics of the Republic, so that the public may be kept well informed. As very important information is found in the publications of this Bureau it would be well to quote here some of the statistics collected:

According to the census of 1900, the Republic has 13,545,462 inhabitants, against 12,632,427 in 1895; that is to say, that there has been an increase of 913,035 inhabitants.

In 1898 there were in Mexico 489,933 births, 61,674 marriages, and 452,292 deaths.

There are eighteen banks in the country, one hundred and eighteen factories for the manufacture of cotton fabrics, whose sales amounted to $29,753,414.11, employing some 21,960 workmen, 2,211 distilleries, seven hundred and twenty-one tobacco factories and seventy-two breweries.

Mexico City alone consumed 99,756 head of cattle, 130,736 sheep, and 73,427 hogs. The states consumed 764,935 head of cattle, 790,148 sheep, 617,124 goats, and 659,334 hogs.

The amount of imports was $56,189,634, against $134,900,113 of exports, with a difference of $78,710,539 in favor of the exports.

There are 14,859 kilometers of railroad lines, telegraphs cover a distance of 68,548 kilometers, and there are 30,328 kilometers of telephone lines.

Real estate property is valued at $350,523,-739.42 and other property at $423,947,748.62, making a total of $774,471,488.04.

There are thirty-three museums in the Republic, one hundred and thirty-nine public libraries, and seven hundred and two newspapers.

The mint of Mexico employed $19,617,-582.58 worth of metals.

The exportation of metals reached the sum of $20,910,693.

Regarding the army and navy, we would say, that up to December, 1899, there were eight major generals, fifty-three brigadier generals, nine hundred and forty-four majors, 2,481 subordinate officers, and 27,247 troopers.

The Mexican government pays a great deal of attention to public hygiene. Through the Board of Public Health, methods of sanitation are rigidly enforced throughout the whole country, and any new methods suggested by either natives or foreigners are carefully studied, and, when found advantageous, are carried into practice.

In order to be kept well informed of the scientific advancement that may be made in this line, the above named institutions are always in close touch with those of similar character in foreign countries, and the government sends abroad to the International Congresses the most

competent men that can be procured in the country on matters pertaining to the particular subject which is to be discussed, whether it be scientific, artistic, or commercial.

The sewerage system in Mexico was formerly very antique, bad, and dangerous, but the Board of Health of Mexico, having in mind the local necessities, changed that system for a better one which is practical and complete, according to the latest improvements in the sewerage systems of European and American cities.

The City Council is also paving the streets, some of which are with asphalt, in the same style as the streets of Buffalo, and is making the sidewalks of Roman cement.

More detailed information relative to the leading official exhibits that are classified in this division is published in the appendix.

Liberal Arts Exhibit

Division XV

Liberal Arts

(Chief, Maximiliano M. Chabert)

GROUP CXXII

Education

1. Escuela Normal para Profesoras, México, D. F. **Class 507**
   Pupils' work, embroidery.
2. Escuela Normal para Profesoras, Oaxaca.
   Pupils' work, embroidery.
3. Gobierno del Estado de Jalisco, Guadalajara.
   Map of the Public Instruction of the State of Jalisco.
4. Secretaría de Justicia é Instrucción Pública, México, D. F.
   Legislation and organization of the public education dependent upon the Federal Government.
   Pupils' work.
   Text books.[1]
5. Asociación de Ingenieros y Arquitectos, México, D. F. **Class 508**
   Scientific publications of the Association.
6. Comisión Geográfico Exploradora de la República Mexicana, Xalapa, Veracruz.
   Collection of scientific, astronomical, topographical, and natural history works of the United States of Mexico.[2]
7. Comisión de Parasitología, México, D. F.
   Collection of dangerous insects to fruits and to tree fruits. Photographs of some of its works.
8. Departamento de Pesas y Medidas de la República Mexicana.
   Publications.[3]

[1] See Note I in appendix.
[2] See Note II in appendix.
[3] See Note III in appendix.

9. Escuela Normal de Veracruz, Xalapa, Veracruz.
Collection of fibers classified by the students.

10. Instituto Geológico de México, México, D. F.
Geological cut from Acapulco to Veracruz.
Album of maps of bed opals, onyx seam, volcanoes, etc., of the United States of Mexico.
Scientific publications.
Collection of rocks, minerals, and marbles of the United States of Mexico.[4]

11. Instituto Médico Nacional, México, D. F.
Herbarium of medicinal plants.
Medicinal plants presented in commercial form.
Active substances extracted from the plants.
Medicines prepared in the Institute.
Scientific publications relative to the Institute's work, and reproductions of rare works on medicine.[5]

12. Observatorio Astronómico de Tacubaya, Tacubaya, D. F.
Scientific publications relative to its work.[6]

13. Observatorio Meteorológico Central, México, D. F.
Scientific publications relative to its work.[7]

14. Secretaría de Fomento, México, D. F.
Collective exhibition of the works of scientific institutes under the control of said department.

15. Secretaría de Fomento, México, D. F.
Collection of publications by Mexican authors printed free by said Department of Public Promotion (Secretaría de Fomento) in order to promote the intellectual development of the country.[8]

16. Sociedad Farmacéutica Mexicana, México, D. F.
"La Farmacia," a scientific review.

17. Sociedad Mexicana de Historia Natural, México, D. F.
A scientific review.

Class 509

18. Escuela Nacional de Bellas Artes, México, D. F.
Crayon drawings and oil painting made by the pupils, photographs of the different departments of the school.

4 See Note IV in appendix.
5 See Note V in appendix.
6 See Note VI in appendix.
7 See Note VII in appendix.
8 See Note VIII in appendix.

19. Secretaría de Justicia é Instrucción Pública, México, D. F.
Works and photographs of the Fine Arts School.

20. Escuela Nacional de Ciegos, México, D. F. **Class 512**
Different weaving work, lace trimming samples, binding typography, made by pupils.
Picture of the classes and factories.

GROUP CXXIII

Books

21. Alvarado, Ignacio, San Luis Potosí. **Class 513**
"Estudios clínicos de la fiebre amarilla en Veracruz," a scientific book on medicine.

22. Anguiano, Angel, México, D. F.
Text books.

23. Aguilar, José, México, D. F.
Book.

24. Biblioteca de la Secretaría de Fomento, México, D. F.
Small library showing the decimal classification adopted in the library of said department.[9]

25. Ceballos Dosamantes, Jesús, México, D. F.
Scientific books.

26. Chambon, Hipólito, México, D. F.
"El Progreso de México," an agricultural review.

27. Chavero, Alfredo, México, D. F.
Book, "Codice Borgiano."

28. Chism, Richard E., México, D. F.
"El Minero Mexicano," a mining review.

29. Collado, Salvador, Guadalajara, Jalisco.
"El Puente de Arcediano," a scientific work on bridge construction.

30. Contreras, Manuel María, México, D. F.
Text books.

31. Correa, Alberto, San Juan Bautista, Tabasco.
"El Estado de Tabasco," statistical and descriptive work.

[9] See Note IX in appendix.

32. Correa Zapata, Dolores, México, D. F.
Literary works.

33. Crespo y Martínez, Gilberto, Mexican Consul, Habana, Cuba.
Literary and scientific essays.

34. Dirección General de Estadística de la República Mexicana, México, D. F.
Statistical publications.
Statistical and synoptical chart of the United States of Mexico.[10]

35. Elle, Paul, México, D. F.
"El Cortador," book on tailoring.
Squares and models for tailors.

36. Escobar, Rómulo, Ciudad Juárez, Chihuahua.
"El Agricultor Mexicano," "El Hogar," journals.

37. Esquivel y Compañía, San Luis Potosí.
"El Contemporaneo," journal.

38. Godoy, José F., First Secretary of the Mexican Embassy, Washington, D. C., U. S. A.
Historical, literary, and legislative books.

39. Gobierno del Estado de San Luis Potosí, San Luis Potosí.
"Historia de la Instrucción Pública en San Luis Potosí," historical book.

40. Gobierno del Estado de Guanajuato, Guanajuato.
Book on ethnography and statistics of the State of Guanajuato.

41. Herrera, Alfonso, México, D. F.
"La Vie sur les hautes plateaux," scientific book.

42. Manterola, Ramón, Tacubaya, D. F.
Text books.

43. Martínez, Miguel F., México, D. F.
"Memorias de Instrucción Pública," a book on public instruction.

44. Medina y Ormachea, Carlos, México, D. F.
"Legislación de los pueblos latinos," a book on legislation.

[10] See Note X in appendix.

45. Matute, Juan B., Guadalajara, Jalisco.
"Sistema métrico decimal," the metrical system.

46. Nájera Herrera, José M., Guadalajara, Jalisco.
"Geografia de Jalisco," geographical book.

47. Peñafiel, Antonio, México, D. F.
Scientific books.

48. Peña, Rafael Angel de la, México, D. F.
Text books.

49. Portillo, A., México, D. F.
"La Revista Agrícola," an agricultural review.

50. Ramirez, Genaro B., Guadalajara, Jalisco.
"Legislación sobre aguas," a book on water supply.

51. Ramirez Ramos, Juan, México, D. F.
Copy book for pupils.

52. Rivera, Diego, México, D. F.
Book.

53. Schulz, Miguel E., México, D. F.
"Apuntes para el curso de Geografía en la Escuela Nacional Preparatoria de México," a geographical book.

54. Secretaría de Guerra y Marina, México, D. F.
Official publications.

55. Secretaría de Hacienda y Crédito Público, México, D. F.
Official publications.
Fiscal statistics of the United States of Mexico.

56. Secretaría de Justicia é Instrucción Pública, México, D. F.
Official publications.

57. Secretaría de Relaciones Exteriores, México, D. F.
Official publications.

58. Sellerier, Carlos, México, D. F.
"Notes on Mining in México," statistical book.

59. Sifuentes, Salvador C., México, D. F.
"La Evolución Escolar," a scholars' review.

60. Sociedad Anónima de Concursos en Coyoacán, Coyoacán, D. F.
Reviews of the expositions held in Coyoacán, Mexico, for development of the agricultural industry.

For explanation of classification see index.

61. Tablada, L. y Medina Lopez F., Texcoco, México.
Two dramas.

62. Valay, Fernando, México, D. F.
"Ensayos taquigráficos," a short hand text book and maps.

GROUP CXXIV

Scientific Apparatus

Class 514

63. Alva, Ramón, México, D. F.
Mexican seismographer which marks the effective movements of the earth.

64. Casa de Moneda de la República Mexicana, México, D. F.
Photographs of different departments of the Mint, showing its institutions and works.

GROUP CXXV

Photography

Class 515

65. Aguirre, Eduardo, Guanajuato.
Photographs.

66. Armendaris, E., México, D. F.
Photographs on glass plates.

67. Barriere, Carlos, Guadalajara, Jalisco.
Photographs.

68. Curet, J. B., México, D. F.
Photographic plates made of gelatine bromide. Varnish for retouching the same.

69. Ferrari Pérez, Fernando, México, D. F.
Photographs on glass plates.

70. Fregoso, Tomás, Hermosillo, Sonora.
Photographs.

71. García, D., San Luis Potosí.
Photographs.

72. García, Romualdo, Guanajuato.
Photographs.

73. Gómez Gallardo, Ignacio, Guadalajara, Jalisco.
Photographs.

74. González, Arturo, Guadalajara, Jalisco.
Photographs.

75. González, A. Y., Guadalajara, Jalisco.
Photographs.

76. Herrera y Paz, Leonardo, México, D. F.
Photograph background.

77. Lange, Emilio, México, D. F.
Photographs.

78. Lupercio, José, Guadalajara, Jalisco.
Photographs.

79. Méndez Hermanos, San Luis Potosí.
Photographs.

80. Mora, O. de la, México, D. F.
Photographs.

81. Schlattman Hermanos, México, D. F.
Photographs.

82. Torres, Manuel, México, D. F.
Photographs.

83. Waite, C. B., México, D. F.
Photographs.

84. White, Eduardo, México, D. F.
Photographs.

GROUP CXXVI

Medical, Surgical, and Dental Instruments

85. Barroeta, Gregorio, San Luis Potosí. **Class 516**
Uterus mirror.

86. Chacón, Joaquín, México, D. F.
Dental works.

87. Hinojosa, Pedro, México, D. F.
Dental works.

88. Soriano, J. M., México, D. F.
Dental works.

GROUP CXXVII

Engineering and Public Works

Class 517

89. Comisión Geográfico Exploradora de la República Mexicana, Xalapa, Veracruz.
Divisional geographical maps of the United States of Mexico.

90. Matute, José Ignacio, Guadalajara, Jalisco.
Geographical maps of the States of Jalisco and Colima and the Territory of Tepic.

Class 518

91. Gobierno del Estado de Jalisco, Guadalajara.
Maps and diagrams of landed property.
Density of population diagrams.
Census of the State of Jalisco, geographical map of the State of Jalisco, hydrographical, geographical, and geological maps and diagrams of the State of Jalisco.

92. Instituto Geológico de México, México, D. F.
Geological survey maps.

93. Secretaría de Fomento, México, D. F.
Photographic map of the Federal District.
Photographic map of the boundaries between Mexico and Guatemala.

Class 524

94. Ayuntamiento de la Ciudad de Tacubaya, Tacubaya, D. F.
Photographs of the city and some of its buildings.

GROUP CXXVIII

Hygiene and Sanitation

95. Consejo Superior de Salubridad, México, D. F. **Class 526**
Human and anti-hydrophobical vaccination.
Statistics of the mortality in City of Mexico.
Photographs and plans of the sanitary installations in the City of Mexico, ports, and frontiers.[11]

96. Secretaría de Gobernación, México, D. F.
Photographs and sketches of the General Hospital of Mexico.[12]

97. Junta de Saneamiento de la Ciudad de México, México, D. F.
Photographs of the sewerage sytem of the City of of Mexico.[13]

GROUP CXXIX

Constructive Architecture

98. Díaz, Jr., Porfirio, México, D. F. **Class 531**
Plans and designs of public buildings and monuments erected and to be built at the City of Mexico.

99. Garza, Daniel, México, D. F.
Plans and designs for public and private buildings.

GROUP CXXX

Social Economy

100. Gobierno del Estado de Jalisco, Guadalajara. **Class 541**
Diagram of Public Security of the State of Jalisco.

11 See Note XI in appendix.
12 See Note XII in appendix.
13 See Note XIII in appendix.

Class 542

101. Secretaría de Gobernación, México, D. F.
Different medicines prepared in the pharmacy of the Public Beneficence.[14]
Photographs of the Penitentiary of the City of Mexico.
Photographs of the Public Beneficence establishments.
Photographs of the sewerage system of the City of Mexico.

GROUP CXXXI

Music, Musical Instruments, and the Drama

Class 543

102. Alcérreca, Felix M., México, D. F.
Musical composition.

103. Balcázar, Francisco, Guadalajara, Jalisco.
Musical compositions, musical grammar, method of singing.

104. Barradas, José, Tacubaya, D. F.
Musical composition.

105. Castro, Ricardo, Tacubaya, D. F.
Musical composition.

106. Cordero, Vicente, Guadalajara, Jalisco.
Musical composition.

107. Peimbert, J., Tacubaya, D. F.
Musical composition.

108. Saucedo, Tiburcio, Guadalajara, Jalisco.
Singing theories.

109. Somellera, Edmundo, Puebla.
Musical compositions.

[14] See Note XIV in appendix.

DIVISION XVI

Ethnology

General View of Ethnology Exhibit

ETHNOLOGY

AS it is known, Ethnology is the science relating to the distribution of any human race with regard to its origin and costumes, which serve to characterize it among other races, by inscriptions on stone, metals, or parchment, and by the language spoken, and also by excavations that have been made demonstrative of the state of civilization reached in the construction of temples, palaces, homes, etc. To give an idea of the part which pertains to Mexico we will quote here the words of Hon. Matías Romero, Mexican Minister to Washington, in his magnificent work published by him in New York City in the year 1898, because we are of the belief that the information contained therein is of the greatest importance. The work is entitled "Geographical and Statistical Notes on Mexico."

"ETHNOLOGY. Mexico is inhabited by native Indians found there during the Spanish Conquest, by descendants of the conquerors of Mexico and other European races, and by a mixture of the two. There are so few inhabitants of African descent that it is hardly worth while speaking of them. The proportion of this population is about as follows: Of European descent, 19 per cent; native Indians, 43 per cent; mixed races, 38 per cent.

"MEXICAN INDIANS. The native Indians found by the Spaniards belong to several nations

and tribes, having different features and entirely distinct languages. The principal of these tribes are the following, some of which are now extinct:

Otomí,	Apache,	Tarahumara,
Chichimec,	Irritilas,	Tepehuan,
Huaxtec,	Tamaulioecs,	Sabaibos,
Totonac,	Zacotec,	Acaxee,
Mixtec,	Huastec,	Xixime,
Zapotec,	Zoqué,	Concho,
Mahuas,	Opata,	Manosprietas,
Toltec,	Guaicurí,	Comanche,
Olmecs,	Taquí,	Cuachichila,
Xicalancs,	Mayo,	Tarascos,
Tula,	Seri,	Mixé.

"These tribes have been classified in the following families:

Mexican family,
Sonorense Opata—Pima family,
Guaicura y Cochimi Laimon family,
Seri family,
Tarasco family,
Zoque—Mixé family,
Totonaca family,
Mixteco—Zapoteca family,
Matlatzinga ó Pirinda family,
Maya—Quiche family,
Chontal family,
Huave family,
Apache family,
Otomí family.

"There is a great deal of similarity between the Mexican Indians and the Malay Asiatic races —especially the Japanese branch—which gives foundation to the idea that the aborigines of Mexico originally came from Asia, or *vice versa*. Their

intensely black hair and eyes, their brown or yellow color, their small stature, and the slight obliquity of their eyes, are features common to the Mexican Indians and the Japanese.

"Some of the Indian languages seem to me to resemble strongly the Oriental ones, though of course I cannot speak with authority, as I do not know any of those languages and have heard only the Chinese, Japanese, and Korean spoken; but I am sure that if any educated and intelligent Chinese would go to Mexico and spend some time among the Indians he would find traces in the language which would contribute greatly to clear up this problem.

"The Indians of the different tribes do not generally mix with one another, but intermarry among themselves, and this fact contributes greatly to their physical decay, and makes very difficult, at least for some time to come, the complete assimilation of all the Mexican population.

"The Mexican Indians are on the whole a hard working, sober, moral, and enduring race, and when educated they produce very distinguished men. Some of our most prominent men in Mexico, like Juarez as a statesman, and Morelos as a soldier, were pure blooded Indians, and fortunately there is no prejudice against their race in Mexico, and so when they are educated they are accepted in marriage among the highest families of pure Spanish blood.

"Professor Starr's theory that we are all on this continent assuming the type of the Indian,

is, in a measure, true. It is nothing new, for it was already indicated by an English physician travelling in the British Colonies before the United States was thought of.

"RUINS. We have in Mexico some of the most ancient and remarkable ruins, and although there are different surmises about the time at which they were built and the people who built them, nothing is known positively about them. The principal ones are in Uxmal and Chichen Itza in the State of Yucatán, Comalcalco in the State of Tabasco, Teotihuacán in the State of Mexico, Cholula in the State of Puebla, in the State of Tlaxcala, and Mitla in the State of Oaxaca.

"LANGUAGES. About one hundred and fifty different Indian languages are known to have been spoken by the Mexican Indians. The Spanish monks accompanying the conquerors and who went to the country afterwards compiled grammers and even dictionaries of some of these languages; but the Indians falling into a semi-barbarous state after the conquest, having lost their civilization and literature, their languages have either disappeared completely or become very primitive, and it is ascertained that some of them have become entirely extinct.

"The Spanish is, of course, the language of the country and most of the Indians speak it, although very imperfectly and incorrectly, only a small portion of them speaking no language but their own.

"The chief languages spoken in Mexico proper, excluding the states of Chiapas and Yucatán, are as follows:

Nahuatl or Mexican (Aztec) with Acaxee, Sabboibo, Xixime, Cochimi, Concho, and other members of the same family.

Seri, Upanguaima, and Guaima.

Papago, Opata, Yaqui, Mayo, Tarahumara, Tepehuan, Cora, etc.

Apache, or Yavipai, Navajo, Mescalero, Llanero, Lipan, etc.

Otomi, or Hia-hiu, Pame, Mazahua, etc.

Juaxtec, Totonac.

Tarascan, Matlaltzincan.

Mixtec, Zapotec, Mixé, Zoqué, Chinantee."

For a better comprehension of the different languages spoken throughout the Mexican territory the public may consult a map of the Republic in which are marked the places in which the different languages are spoken, having been arranged with that end in view by Engineer Antonio García Cubas.

Division XVI

Ethnology

(Chief, Engineer Rosendo Sandoval)

GROUP CXXXII

Prehistoric Archæology

1. Secretaría de Fomento, México, D. F. **Class 553**
   Reproductions of cinerary, decorated vases, and urns.
2. Peñafiel, Antonio, México, D. F. **Class 555**
   "Teotihuacán," historical book.
3. Secretaría de Fomento, México, D. F.
   Complete collection of reproductions of astronomical, mythological, hieroglyphic stones, Aztec goddess.
4. Blake, W. W., México, D. F. **Class 557**
   Clay and stone idols, vases, etc.
5. Sandoval, Rosendo, Tacubaya, D. F.
   Reproduction of one vase of Obsidian and Idols.
6. Secretaría de Fomento, México, D. F. **Class 563**
   Astronomical, cosmogonical stones, and the date of the Aztec calendar.
7. Peñafiel, Antonio, México, D. F. **Class 564**
   Tarasco, Mexican, Zapoteca, and Huasteca books, and alphabets decorated in Aztec style.
8. García Cubas, Antonio, México, D. F. **Class 566**
   Map of the Valley and City of Mexico in the middle of the sixteenth century.
   Map of the lands discovered and conquered in the Republic by the Spaniards during the sixteenth century.

9. Secretaría de Fomento, México, D. F.
Collection of decorative models of the ruins of Teotihuacán.
Aztec decorated plates.
Water colors of vases found in City of Mexico.
Aztec pictures in water colors.
Water color of the Teotihuacán frescoes.
Teponaxtles.
Aztec seats.
Panoplies and trophies.
Codice Borbónico.
Codice Fernández Leal.
Codice Mizteco.

10. Peñafiel, Antonio, México, D. F.
Geographical names of Mexico.
"Fabulas de Esopo" in Mexican language.
History of the Province of Santiago de Mexico.
History of the Province of Santo Domingo.
Congreso of Americanistas.
Archæological catalogue.
A carpet with Archæological phototypes.
Monuments of the old Mexican art.
Antiquaries of the Colombian Commission.

Class 567 11. Secretaría de Fomento, México, D. F.
Collection of cotton, clay, and woolen articles of ancient and modern Indian art.

DIVISION XVII

Fine Arts

Fine Arts Exhibit

Division XVII

Fine Arts

(Chief, Maximiliano M. Chabert)

GROUP CXXXVI

Class 577

1. Almanza, Cleofas, Zacatecas.
   Oil painting, landscape.
2. Bernardelli, Félix, Guadalajara, Jalisco.
   Oil painting, "The Zula River."
3. Díaz de Luque, Ceferina, México, D. F.
   Oil painting, "Palermos Garden," two copies from nature, "Marine View."
4. Lupercio, José, Guadalajara, Jalisco.
   Three oil paintings, landscape.
5. Luque Aicardy, Eduardo, México, D. F.
   Oil painting taken from nature.
6. Martínez, Guadalupe E., Guadalajara, Jalisco.
   Oil painting.
7. Mendoza, Francisco de P., México, D. F.
   "Portrait of Mr. ——"
8. Ramirez, Joaquín, México, D. F.
   Water colors, "Mexican Costumes."
9. Tovilla, José Inés, Aguascalientes.
   Oil painting.
10. Vázquez Schiaffino, A., Guadalajara, Jalisco.
    Oil painting.

APPENDIX

Notes Relative to the Liberal Arts Division

Notes Relative to the Liberal Arts Division

Note I

Public education in Mexico embraces primary, secondary, and professional instruction. In order to attend properly to this service, the Department of Public Instruction has created an especial bureau for each of the three branches of instruction.

According to the political organization of the Mexican Republic, the action of the Department of Public Instruction only extends to the Federal District and territories.

Primary instruction is obligatory, free, non-sectarian, and for both sexes. There are three kinds of schools: Elementary schools, high primary schools, and night schools for adults.

In order to obtain uniformity in relation to the courses of studies, as well as from an administrative point of view, the law of the third of June, 1896, established a "General Direction of Primary Instruction," having Delegations in the territories of Tepic and Lower California. Although these latter institutions are now dependent from the "General Direction," they have similar powers to it.

The General Direction as well as the Delegations are made up of a large inspector's staff that constantly visits the schools to encourage them and attend to their wants.

Secondary and professional instruction in the Federal District are divided into several studies which correspond to the following departments:

1. The Normal School which has a primary school annexed for the practical and pedagogical work of the students.

2. The Normal School for Women which has a primary and an elementary school for the practical work of the students.

3. The National Preparatory School where the students acquire the necessary fundamental knowledge to follow any professional study.

4. The National School of Law for those who wish to take up the studies leading to the degree of Attorney and Counsellor at Law and Notary.

5. The National School of Medicine offers a thorough course in medicine, pharmacy, and mid-wifery. To this school belongs the Pathological Institute, whose principal object is to offer the pupils a complete course in pathological anatomy, pathology, and national medicine. The Academy of Medicine, supported by the Department of Instruction, depends from this school.

6. The National School of Engineering with a complete course in topography, metallurgy, and geography. It also gives especial courses in civil, electrical, mining, and industrial engineering. In order to complete the studies in mining engineering, the Department of Public Promotion has established a Practical School of Mining and Metallurgy in the City of Pachuca.

7. The National School of Agriculture and Veterinary which gives the diplomas of Bachelor in Veterinary and Bachelor in Agronomy, preparing those who are going to practice such professions.

8. The National School of Fine Arts devoted to the especial studies of architecture, painting, sculpture, and engraving.

9. The National Conservatory of Music and Elocution which prepares the students to become professors of music, singers, actors and dramatists.

10. The Superior School of Commerce and Administration.

11. The Industrial National School for Men where the students receive a thorough instruction for handling the most complicated electrical and mechanical machinery, preparing them for the principal and most necessary arts in their daily avocations, such as carpentry, mechanics, printing, and to become chiefs of mechanical shops.

12. The Industrial National School for Women.

13. The Department of Instruction supports a charitable establishment known under the name of "La Paz College," and devoted to the instruction of orphans. This has a primary and an elementary school. An industrial school is under its control.

There is, besides, dependent of the same department:

The National Library with its 200,000 volumes; the Night Library and Annex with 10,000 volumes, and the special libraries of each of the schools already mentioned.

The Bibliographic Mexican Institute, the purpose of which is to register the titles of works published in Mexico and those that the Mexicans may publish abroad, has various bureaus which have their dependencies in all the states of the Republic.

The National Museum which is sub-divided into two principal bureaus, viz.: That of history and archæology, and that of natural history.

And lastly, the Inspection of Archæologic Monuments. This institution has in every city and in all places where remarkable ruins exist, the necessary employees for their preservation.

Referring to public schools again, we will gather here some statistical data up to the year 1899. About that time there were the following schools supported by the Federal Government in the Federal District, and in the territories of Tepic and Lower California:

Schools	Number of Schools	Pupils Inscribed in the Year	Yearly Attendance of the Pupils	Improvements			General Expenses
				Examined	Approved	Concluded Studies	
Primary, . .	479	61,393	31,620	28,340	22,815	2,320	$1,008,665.45
Secondary, .	4	3,449	2,222	1,759	1,332	3,091	241,452.95
Professional, .	10	2,858	2,346	2,382	1,396	220	675,209.75
	493	67,700	36,188	32,481	25,543	5,631	$1,925,328.15

The above information refers only to official schools; but in order to have a general idea of the number of schools which exist in the Federal District and in the territories, we will say that there are besides 176 schools managed by private individuals, 22 managed by associations, and 37 managed by the clergy.

Regarding the total number of schools in the Republic, we give the following data in order to complete this general information, but, as has been said, all do not depend on the Department of Justice and Public Instruction, but are administered by the states of the Federation and the municipalities.

In 1899 there was in the whole Republic:

(Official)	Primary schools, ...	9,271
	Secondary schools, . . .	37
	Professional schools, . . .	57
	Private schools, ...	2,560
	Total, .	11,925

Note II

The Geographical and Exploring Commission was established twenty-three years ago (General Vicente Riva Palacios being Secretary of Promotion at that time), having for its object the formation of the Geographical Chart of the Republic.

The Commission is under the orders of the Department of Promotion and the Department of War, and both contribute to support it. The former encourages the formation of said chart and the latter takes advantage of the work for military purposes. The War Department appoints some officers of the special staff who have acquired their military education at the military academy, and these are added to the Commission.

The organizations of the Commission are as follows: Field Force, Calculating Section, Cartographical Section, Natural History Section, and the Reproduction Shops.

The methods followed in the formation of the general chart will be very shortly explained, it being impossible in such a brief review as this to enter into minute details. These methods are explained in the order corresponding to the organization of the Commission.

Field Work: It is obvious to say that it was necessary to discard any system of extensive geodesic triangulations, for it would be too expensive and limited to apply it to a country like Mexico, lacking means of communication, where the soil is so broken, and where the extensive and virgin forests, as well as the large deserts, are so numerous. The system which was adopted was that of establishing in each of the zones which was to be surveyed, a plot showing the points geographically established by means of astronomical observations, these points being connected among themselves and in all possible directions by the lines of detailed work so as to fill up the polygons enclosing them, as well as to fix the sides of the squares and prove the relative position of the work done, also allowing the distribution of the errors which are inherent to the methods employed in the surveys.

For the determination of time the Commission only uses the equal height of two stars. The latitudes have been almost exclusively determined by circum-meridian zenith distances, which have been observed both to the north and south of the zenith.

To determine the longitude, it follows in general the method of instantaneous signals. The altitudes have been determined by hypsometric observations which are simultaneous with the barometrical observations in the Central Meteorological Observatory of Mexico or with those taken in the temporary observatories which have been established by the Commisson.

The general details have been surveyed with the help of a field compass and perambulator, and the differences in level are obtained with the help of the aneroid barometer.

In the principal centers of operations, it has established small astronomical and meteorological observatories which are necessary for the execution of the work. These observatories obtain, besides the data relative to the determination of geographical co-ordinates, sufficient details to reduce the declination of the compass.

The summary of the work executed can be divided as follows: Area completely surveyed, 400,000 square kilometers, 408 points having been geographically placed; roads and rivers have been surveyed to the extent of 111,706 kilometers.

CALCULATING SECTION: In this department, after properly arranging the data supplied by the field force, the numerical results obtained from that operation, and the calculations which have been determined, are properly arranged and bound, as well as the diagrams on which they are drawn.

CARTOGRAPHICAL SECTION: This section takes charge of all the labors relating to the construction and drawing of charts; it also attends to the reduction of these charts to different scales, and it classifies, registers, and records them, as well as distributes those which have to be used from each one of the leaves; and lastly, it forms the catalogues. The advantage of subdividing the extensive charts is very well known and hence the Geographical and Exploring Commission ought to follow this system. The first Director of the Commission, the engineer, Mr. Agustin Diaz, had the idea of subdividing the General Chart of the Republic and that of the States, and he divided them into sheets of a common size, arranged in such a way that by means of the number and letters placed on each sheet and the designation of the class to which it belongs, it can be distinguished from the others, and once the system is understood, an idea is immediately formed of the relative situation of each operation in the general map, the area that it covers, and the place in the archives where the desired information is to be found.

The dimensions adopted for these sheets are 0.53 centimeters of base by 0.40 of height between margins. These have been adopted in order that the City of Mexico, which is the capital of the Federal Government, should occupy the center of the sheet on which it is to be shown in the different subdivisions, such as the topographical on a scale of 1 to 20,000; the geographical on a scale of 1 to 100,000, and the administrative on a scale of 1 to 500,000; thus by subordinating in each case the number of sheets to the regular sub-multiples of those scales, the complete map of the country can be included in that number as well as that part of the adjoining country which the administration is most interested to know. And finally, it is so organized that the designations by letters carried by the subdivision sheets of 1 to 20,000 and 1 to

100,000 are so organized that the letter corresponding to the central sheets should be m or M (according to the scale), the initial letter of Mexico.

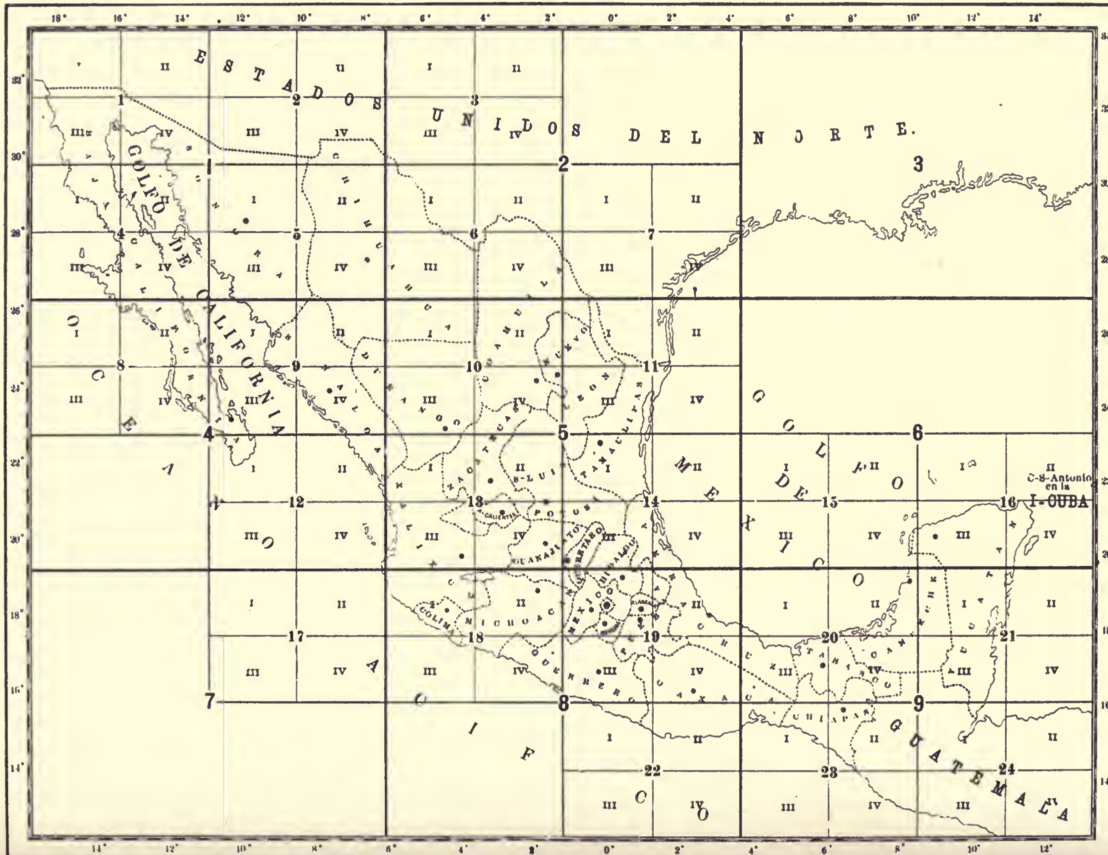
A simple inspection of the accompanying diagram will explain the system under which the sheets are distributed in the different scales of regular subdivisions. That of the geographical scale is at 1 to 2,000,000, containing the map of the country and certain portions of the adjoining countries, being shown on nine sheets marked in Arabian numbers in this style **1** to **9.** That on a scale of 1 to 1,000,000 which reproduces the same map, reducing the portions of the adjoining countries on the frontiers of the Republic; this includes twenty-four sheets which are numbered from 1 to 24, also in Arabian numbers, but of the upright capital Roman type. That of 1 to 500,000 covering the same parts by means of ninety-six sheets, and in which each sheet of the previous map is extended over four, which are distinguished amongst themselves by the Roman numbers of I to IV. Those on the scale of 1 to 250,000 are contained in three hundred and eighty-four sheets, being four for each one of the previous scale, and are distinguished by the block letters **A, B, C, D.** While the last geographical subdivision on a scale of 1 to 100,000, and on which only the number of leaves necessary to cover the whole Republic will be prepared, will be in the proportion of twenty-five sheets on a scale of 1 to 100,000 for every sheet of 1 to 500,000, and will be distinguished by the letters of the Spanish alphabet (excepting the ll and ñ), using the upright Roman capitals. For the subdivision on the topographical scale of 1 to 20,000, the twenty-five sheets, which will be engraved for each one on the scale of 1 to 100,000, will be distinguished by the same letters of the alphabet, and of the same character, but small letters.

From the above explanations, it will be seen that a wall map of convenient dimensions can be arranged by using the leaves on a scale of 1 to 2,000,000, while those pertaining to other scales can be compiled in the form of an atlas in the order which is above described.

The section has finished the drawing of one hundred and five sheets of the General Chart and many special charts of some of the States of the Republic. At present it is about to finish fifty sheets of said General Chart besides that already made.

THE REPRODUCTION SHOPS: The Commission has two shops at its disposal, one for lithography, and the other for photography, where it executes all the work finished by the former sections.

NATURAL HISTORY SECTION: The labors of this section are almost exclusively confined to the collection and preparation of the specimens belonging to the zones that are explored. These specimens have been carefully classified, and they constitute at present a rich museum to which the public has free access. For the zoological classification, the contents of the catalogues published by the British Museum



Geographical and Exploring Commission of Mexico

have been taken as a basis. The same order was not observed with respect to the biological specimens, as it was considered more advisable to follow that laid down in the "Central American Biology," a work that is more especially applicable to Mexico, although excepting from it the case of the coleoptera which are almost always arranged in accordance with the Genera of Lacordaire. In the botanical collection everything has been arranged in accordance with the Genera Plantarun of Betham and Hooker. In the mineralogical, geological, and palenteological collection it has been considered preferable, on account of our being on the same continent, to accept the guidance of the North American naturalists, and especially the works of Professor J. D. Dana. The section has a very fine library, the number of whose volumes is increasing every day.

The Commission has been given awards at the following expositions:

New Orleans (1885), an Extraordinary Award; Paris Exposition (1889), two Grand Premiums; Chicago Exposition (1893), six Premiums in several departments, that is, three in geographical work and three in the natural history collection; International Geographical Congress in London (1895), where the exhibits of the Commission were considered in such high estimation that several public institutions were interested in getting them, and the Commission ceded them to several institutions; Atlanta Exposition, five Awards, three for the geological department and two for the natural history collection; Exposition of Texas (1900), one First Premium for geographical work and three for collection of natural history; and lastly, Paris Exposition (1900), a Grand Premium.

Note III

Since 1857, the Mexican Government officially adopted the decimal metric system of weights and measures; but it could not be made obligatory until the year of 1896, and ever since it has been rigorously applied all over the country.

Although the old system has not entirely disappeared, owing to its considerable influence in the customs of the people, it is evident that the decimal system has rapidly extended, owing specially to its being taught in the primary schools.

As a natural consequence of the adoption of the French system of weights and measures, Mexico forms part of the International Meter Convention, contributing to the sustenance of the International Office of Weights and Measures, located at Bern, Switzerland.

In the Department of Weights and Measures of Mexico, standards are kept for the purpose of comparing periodically (according to the law), the measures of second and third classes, used all over the Republic.

Investigations are made in the same department of the technical and practical questions relating to the measuring and weighing apparatus and shape of weights, also promoting what is deemed necessary for the keeping and application of the national system of weights and measures.

Note IV

The Geological Institute of Mexico was founded with the following objects: To make a geological study of the country; to form and publish a geological map of the Republic; to make especial and new geological maps and studies of interesting regions, such as mineral districts, difficult constructions, important mountains, etc.; to form and preserve the Geological National Museum which will serve: 1st, to contain the classified collections that may form a basis for the construction and arrangements of maps; 2d, the cuts, profile views, models, etc., that give a complete idea of the formation of the land, the properties of the soil, of the mineral wealth, and of the industries to which these refer.

It has besides the object of gathering and publishing data relative to the history and statistics of mineral progress in Mexico. The work has been from the commencement devoted exclusively to the formation of a general geological map and a mineral map of the country. The first was designed to give an idea of the close connection to one another, in the controlling geological formations, and thus the most interesting of the country, and at the same time in order to serve as a basis for the work more in detail, which is to be compiled later on. The mineral map will serve to present to the country, from the mineral point of view, the real importance that should be attached to it. It will show the vast number of veins in the soil and the diversity of mineral substances contained in its territory. The work is conscientiously designed to make known the true value of our mineral wealth in its present state of investigation as well as to show the treasure hoarded in the soil of Mexico, which claims the investment of new enterprises and new energies, that the country may properly utilize these national products.

Sanctioned by a degree of Congress at the end of 1888, the Geological Institute was founded to take the place of the Geological Commission which had taken charge of the geological sketch and mineral map of the Republic. Thus, at the beginning of the year 1891, the Geological Commission was converted into the Geological Institute, having very few changes in the staff. Since that time the Geological Institute, endeavoring to carry on a vast and interesting line of investigation, has compiled works, some relating to pure geology, and others to the different departments of practical geology.

The explorations, inquiries, and investigations made by the staff of the Geological Institute cover altogether a surface of 1,402,900 sq. kilometers, equivalent to 70 per cent of the total surface of the Republic.

The explorations relative to the surveying of the stratigraphical methods and to the separation of eruptive rocks are in two large groups; the "precretácicas" and "poscretácicas" cover a surface equivalent to 50 per cent of the total surface of the country.

The studies of the mineral districts and the explorations were made for the formation of the geological map of the Peninsula of Yucatan and that of the State of Chiapas and for the geological map which is so minute as to reach one hundred thousand part on the scale. The construction of the geological cut from Acapulco to Veracruz to the scale of 1 to 500,000, embraces a surface of 190,063 sq. kilometers or 9.7 per cent of the entire surface of the Mexican Republic. Of these, 175,500 sq. kilometers relate to the work upon the geological map of the Peninsula of Yucatan and the one of the State of Chiapas by the geologist, C. Sapper. All these numbers have a certain degree of exactness. There remains 15,063 sq. kilometers, out of which 12,120 sq. kilometers reduced to the one hundred thousand scale, have been carefully studied. Beside these, there are 2,500 sq. kilometers correponding to the geological cut from Acapulco to Veracruz, and the final 43 sq. kilometers relative to the study of the mining fields of Pachuca, Real del Monte, and the coal fields of Zacualtipan.

The Institute has issued several special publications which report its constant work, and it publishes, also, a bulletin whose articles have never before been issued.

Note V

The National Medical Institute has for its object the study of the Flora, Fauna, climatology, and national medical geography, and its useful applications, mainly, those that refer to medicine, industry, and the development of national products.

In order to fulfill this object the Institute is made up of a government staff consisting of a director, a secretary, a prefect, and a scientific corporation divided into five sections. Each section has a chief and one or two subalterns with the rank of assistants or clerks. The work of these sections is distributed in the following manner:

Section I. (Natural History). For the collection of products, classification, description, and preservation of them in herbariums or museums.

Section II. (Chemistry). For the qualitative as well as for the quantitative analysis of these products, and for the especial study of any principles or substances susceptible of some application.

Section III. (Physiology). For experimental studies in order to investigate whether the substances are active or poisonous or of some influence in animal economy, by fixing the doses, phenomena, and other data required by science.

Section IV. (Clinical Therapeutics). For the study of these same substances applied to the sick with a curative aim.

Section V. (Geographical and Climatological Medicine). In order to study in the United States of Mexico the distribution of diseases, the hygienic and ethyological conditions, and to form statistical drawings, maps, and indexes which go to assist in the general knowledge of the country under such conditions.

The manner of conducting the work is as follows: With due anticipation, programs are prepared and issued annually, outlining the entire course of work to be followed during the ensuing year. These programs together constitute a general program that gives a report of the work done by all the five sections. There are issued also particular programs which determine especial points for each section.

The chiefs of section meet every month, under the director as presiding officer, and in this meeting every chief reads the report of his work during the month in his own section, including the work of his own assistants. A paper is read besides, written by one of the chiefs or subalterns, that relates to some subject in connection with the institution. There are read also, in these meetings, suggestions or especial essays ordered by the director in charge or by the Department of Public Promotion.

The secretary of these meetings gathers all the documents and publishes them in a review called "Anales del Instituto Medico" (Annals of the Medical Institute).

Stated meetings also take place at the end of the year, and extraordinary ones when some especial subject is to be discussed.

The greater part of these meetings are held in order to examine the articles which form the work called "Datos para la Materia Medica Mexicana." This work has continued to be issued during the past seven years, and three of its volumes have already been published.

The result of the careful work of the Institute is too broad to be given in this brief review. But in order to give a general idea of the results of that work we will enumerate farther on some of its principal points: In Section I, in order to arrange the herbariums, there has had to be collected more than 17,000 botanical specimens, being classified in general over 6,000 species, and provisionally in families more than 11,000. The drawings made for the "Album Iconografico," for the "Anales," and for the "Datos para la Materia Medica," embrace

over 400 photographs, and more than 700 drawings of trees, landscapes, etc. There has also been collected copies and counter-drawings of plants from the works of Humboldt, Cabanilles, and Mociño, all numbering about one thousand.

In Section II, the analyzed plants are over one hundred, and the active substances extracted from them, such as resin, essences, acids, alcaloids, glucoses, and coloring matter, sum up seven hundred. A good collection of these substances, conveniently prepared, is exhibited at this exposition. To these, analytical work must be added, other analyses of nourishing substances, mineral and natural water, cement, and land; being over two hundred of these studies, without counting the analyses of urine, which are over one thousand.

In Section III, about one hundred plants have been experimentally studied. The exhibition comprises also the studies of pathological anatomy and histology, the analyses of biological chemistry, and even the necessary pharmaceutical preparations for the experiments. There has been also added to this section bacteriological specimens, as well as those of micro-photography, which amount to three hundred. This fine collection has been already exhibited at several expositions.

In Section IV, there has been one hundred and more plants carefully experimented in order either to rectify or ratify their curative properties. The Institute has, for these studies, three ample rooms in charge of the San Andres Hospital. This section receives also the liberal help of several doctors of said hospital, and that of the other hospitals of the city. The clinical experiments do not consist merely in the administration of the substances made of our medicinal plants, but it is based on careful clinical observation in which the physical, chemical, and bacteriological methods are followed. The number of clinical specimens gathered go up to thousands, and there are a great many plants as the "Zapote blanco," aboriginal purgatives, etc., which undergo a very close examination in order to find their therapeutical properties. Many especial studies have been made in this section, as the Koch's lymph, the treatment of tuberculosis and asthma by compressed air, the study of mineral water of the country, and a work of this kind has been copied in an American text book, entitled "Hand Book of the American Sciences."

Section V has in charge the formation of the Index of the Medical Geography of the Mexican Republic. This section sent thousands of circulars containing 3,000 questions to all the municipalities of the country to be answered by them. Up to the present time half of the municipalities have replied and as a result of such information there exists to-day in the Index about 80,000 answers. Several especial essays have been written for this section, and we will name some of them to give a general idea of the work: "Acclimating of the Foreign Colonies in the Country," "Mortality in the City of Mexico During Twenty-five Years in Comparison with the Quantity of

Rain," "Influence of the Desiccation of the Lake of Texcoco with the Mortality in the Capital," "Origin, Distribution, and Consumption of Public Water in the Valley of Mexico," etc.

The secretary of the Institute has in his charge all its documents, having at the same time the duty to keep all the printed works that the Institute has published or encouraged as well as the reprinting of its most important publications. The "Medical Geography of the Republic of Mexico," by Dr. Domingo Orvanaños; the "Desecación del Lago Texcoco," and "La Anoxihemia Barométrica," by Messrs. Vergara Lopez and Herrera; "The Botanical Library," by Dr. Leon; "The Medical Zoology," by Dr. J. Sanchez; "The Catalogue of Medicinal Plants," of Dr. Altamarino; "The List of Vulgar Botanical Names of Trees and Shrubs Proper to Rebuild the Forests of the Republic;" "The Vegetation of the Valley of Mexico," by Dr. Ramirez, and some other pamphlets are grouped in those of the former class.

To the second kind belongs "The Mexican Flora," by Messrs. Sesse; the work called "Planta Nova Hispania," by the same author; "Essay of the Vegetable Materia Medica of Mexico," by Dr. Vicente Cervantes; "Essay for the Mexican Materia Medica," written by a commission of Puebla; seventy-nine pamphlets of "Materia Medica," and theses by a number of pharmacists and Mexican doctors during the last third of the last century, who have gotten together a beautiful collection called "Monografias Mexicanas de Materia Medica."

Finally, the Institute has among its members a number of distinguished writers in this country as well as abroad. There can be found among these last a number of persons of universal reputation in science, such as Messrs. Bouquillon, Limoussin, and Houdas, of Paris, De Candelle, of Geneva, Janssens and Crismer, of Brussels, Britton, of New York, and Remington, of Philadelphia.

Note VI

The Astronomical Observatory is situated in the highest place of the City of Tacubaya, near the City of Mexico. It is especially devoted to the formation of the photographical map and catalogues of the sky in the zone of 10 to 16 degrees of southern declination, to making observations of asteroids and comets, meridians of the stars, and magnetic, meteorological, and occasional spots of the sun.

This observatory maintains relations with the principal astronomical and meteorological observatories in the world and publishes a bulletin where its original work appears. It also issues an annual review with useful data for engineers, and very instructive articles, which contribute to the spreading of astronomical knowledge.

Note VII

Priest José Antonio Alzate stands in the first place among those who cultivated meteorological science in the country. He devoted himself to its study and made regular observations during more than eight years, as he himself says in his "Descripcion topográfica de México, 1738–1799. Of these observations, he, unfortunately, only published those belonging to the last nine months of the year 1769, in his famous "Gaceta de Literatura de México," 1788–1795. He also published many articles describing some phenomena and instruments, climates of towns, valuable and useful observations, in other of his publications, "Diario Literario de México," 1768, "Asuntos varios sobre Ciencias y Artes," 1772–1773, and "Observaciones sobre la Física, Historia Natural y Artes útiles," 1787. He was the first to determine the altitude of the City of México.

After these labors of Priest Alzate, we find in the Journal "El Sol" a regular series of observations published, daily, from June 14, 1824, to January 14, 1828; Dr. John Burkart, in 1826; Sr. Francis Gerolt, from 1833 to 1834, at the School of Mines; Sr. José Gómez de la Cortina, Count de la Cortina, from 1841 to 1845; the members of the Geographical Section of the Army Staff, from 1842 to 1843; the astronomer, Sr. Francisco Jiménez, in 1858; the School of Mines, in the years 1850, 1856, 1857, and 1858; Sr. Ignacio Cornejo, M. E., at the same school, from 1865 to 1866; and Sr. Juan de Mier y Teran at the "Escuela Preparatoria," from 1868 to 1875, respectively, made some meteorological observations.

A series of observations, from 1855 to 1875, was made at the Hacienda de San Nicolas Buenavista, and another one at the City of Córdoba, from 1859 to 1863, by Dr. José Apolinario Nieto; Sr. Cárlos Sartorius, at Hacienda del Mirador, State of Veracruz; Sr. Miguel Velázquez de Leon, and his sons Joaquín and Luis, engineers, from 1869 up to the present, at the Hacienda del Pabellon; Sr. Gregorio Barreto, from 1869 to 1880, at the City of Colima; General Mariano Reyes, Sr. José Maria Romero, engineer, and Sr. Pascual Alcocer, from 1870 to the present date, at the City of Querétaro; Sr. Lázaro Pérez, from 1874 to 1885, at the City of Guadalajara; Sr. Isidoro Epstein, at the City of Monterrey, 1855; Sr. Vicente Reyes, a civil engineer and architect at the City of Cuernavaca, 1873, 1874, and 1876; Sr. Joaquín de Mendizabal Tamborrel, an engineer, at the City of Puebla, 1872–1873; Sr. Agustin Galindo at the same city, 1875; Prof. Manuel M. Cházaro, at San Juan Michapa, State of Veracruz, 1872–1873; Priest Pedro Spina, S. J., at the City of Puebla, 1876, and perhaps many others of whom we have no record, have devoted themselves to making meteorological observations.

The "Sociedad de Geografía y Estadística," the most ancient scientific society in México, distributed, in 1862, some instruments and instructions to observers.

Finally, on March 6, 1877, General Porfirio Diaz being President of the Republic, and by the suggestion of General Vicente Riva Palacio, then Secretary of Public Works, the Central Meteorological Observatory was established for the study of atmospherical and other terrestrial phenomena. It has directed its attention mainly to weather forecasting, counting on the active co-operation of forty-one observatories distributed over the Republic.

During the twenty-four years of its existence personal investigations have been made with the principal meteorological instruments, thus securing very complete series of observations for the study of the climate in the City of Mexico.

Every morning telegrams are received from the forty-one meteorological stations established throughout the country, which states the results of a complete observation made twenty-three minutes after six o'clock A. M. (eight A. M. of the meridian seventy-five degrees west of Greenwich). Daily forecasts of the weather are issued by means of these telegrams and from those received from the meteorological stations of the United States near our frontier, which are transmitted by the General Direction of Telegraphs of the Government. Besides these, it also receives about two hundred messages from two hundred other telegraphic stations stating the condition of the weather in their respective localities, all of which contribute to form a sufficient and exact conclusion in regard to the weather of the Republic.

The results of daily observation made at the Central Observatory, as well as those of the foreign observatories, are published in a monthly bulletin.

The simultaneous observations made throughout the Republic at 6.23 A. M., Mexican time, are used in forming the weather charts.

Note VIII

On account of the amount of official work that the Department of Public Promotion had to have printed for its circulation, it was considered necessary to establish a Printing Department. This was organized, and many of its works have been exhibited and been awarded prizes at several foreign expositions.

The Printing Department is not for the service of the public in general, but the Department of Public Promotion, wishing to encourage the development of science and literature, has printed and prints, free of charge (under certain conditions), many important books, pamphlets, and periodicals, usually giving the preference to those authors who are in need of necessary funds to have their works printed. Thus, the impulse given to science and literature has been a considerable one. The Printing Department has also a photo-engraving department and one for lithographing.

Note IX

The library of the Department of Public Promotion adopted for the arrangement of its new catalogue the system of decimal classification invented by Mr. Melvil Dewey.

This library was the first one in the United States of Mexico in adopting the above mentioned system, Manuel Fernández Leal being Secretary of State during that time.

Note X

The General Direction of Statistics of the United States of Mexico was founded by decree of the Congress of the Union, on May 26th, 1882, initiated by the Secretary of Public Promotion, General Carlos Pacheco, General Manuel González being the President of the Republic. It was open to the public service on July first of the same year, under the direction of D. Francisco Ramirez Rojas. After his death, Doctor Antonio Peñafiel, who is still fulfilling that post, took charge of the Direction.

This bureau is a section of the Department of Public Promotion and is located on San Andrés Street, No. 15. It has charge of all matters relative to the general and economical statistic branch. During the first two years it was occupied in organizing its labor, papers, etc., in order to develop its legal and scientific program.

In the sixty-three volumes that have been published up to this date, the municipal and territorial division of the Republic, the census, the criminal statistics, the demography, the importation and exportation and agricultural statistics, etc., are comprised. It has effected two censuses of the inhabitants of the Republic, one in 1895, and another in 1900. After the first, there was in Mexico 12,632,427 inhabitants, and in the second that number had increased to 13,545,462.

The expenses incurred by this bureau, according to the budget in force, amounts to $23,191.81 per annum, in personal wages, paper, printing, lining, bookbinding, etc.

The Direction of Statistics is in relation with all the offices of its kind existing in the old and new continents.

Note XI

In accordance with the provisions of the Sanitary Code of the United States of Mexico, which came into force in the month of August, 1891, and in accordance with the subsequent provisions of the

decree, issued by the Executive of the Union on the 15th of November, 1894, the staff of the Publie Health Service is at present organized as follows:

For the sanitary service of the Federal District, there is a Supreme Board of Health, which is formed of eleven members, of whom five are civil physicians, the director of the Military Hospital of Instruction, the professor of hygiene in the National School of Medicine, a veterinary surgeon, a pharmacist, a lawyer, and an engineer.

Under the immediate orders of the board there are eight medical ward inspectors, four outside medical inspectors for the districts of Tacubaya, Guadalupe Hidalgo, Tlalpam, and Xochimilco, all of which form the Federal District, four analytical chemists attached to the Inspection of Food and Drinks, an assistant for the bacteriological laboratory, a curator of vaccine, two auxiliary physicians for that department, four vaccine agents for the eight police stations of the city, and a chief of the disinfection service.

The sanitary service of the territories consists of a medical inspector in Tepic, and another in Lower California, who is at the same time sanitary delegate in the Port of La Paz.

As besides being charged with the sanitary administration of the Federal District and territories, the Supreme Board of Health also has charge of sanitary questions within the federal jurisdiction, it fulfills those important functions through the following delegations:

In the Gulf of Mexico: in Matamoros, Tampico, Tuxpam, Veracruz, Coatzacoalcos, Frontera, Laguna del Carmen, Campeche and Progreso.

On the Pacific Coast: in San Benito, Salina Cruz, Acapulco, Manzanillo, San Blas, Mazatlán, Guaymas, Santa Rosalía, Todos Santos, Tonalá, and Puerto Angel.

The sanitary service on the frontier is looked after by three veterinary inspectors, who are distributed in Ciudad Juárez, Ciudad Porfirio Díaz, and Laredo.

The many labors that have to be undertaken by the Supreme Board of Health in accordance with the sanitary code are fulfilled by the aid of twenty-three committees, which are formed out of the members composing that body. These committees are:

1. Administration and regulation of the sanitary staff.
2. Matters of federal jurisdiction.
3. Dwelling houses and schools, subdivided into two, first and second of dwelling houses.
4. Food and drinks.
5. Churches, theatres, and other places of meeting.
6. Factories and industries.
7. Wholesale and retail drug stores.
8. Practice of medicine.
9. Inhumations and exhumations.

10. Epidemology.
11. Epizootics.
12. Dairies, slaughter houses, meats imported from outside the city, and other police matters connected with animals.
13. Prisons, hospitals, and asylums.
14. Markets.
15. Garbage heaps.
16. Military hygiene.
17. Vaccination.
18. Sanitary inspection.
19. Statistics.
20. Bacteriology.
21. Public works.
22. Judicial questions.
23. Publications.

A short statement will be enough to give a knowledge of the forms under which the principal committees of those above mentioned work, and from this sketch it will be easy to infer the practice of the others, according to the branches which are under their control.

The Committee on Federal Questions, which looks after everything connected with maritime health, examines the numerous documents which have to be forwarded from the delegates of the board in the different ports of the republic, and which documents minutely detail all the information referring to the visits which they have to pay to in-coming vessels; everything relating to their bills of health; the decisions which are given when this document is not satisfactory, the form of disinfection to which the vessels, passengers, and merchandise are subjected whenever the sanitary laws require it, and everything concerning the quarantine, whether it be rigorous or simply for observation.

With these documents and with those that are issued by the delegates after visiting the out-going vessels, and which refer to their sanitary condition, as well as that of the passengers, crews, and an examination of the merchandise carried on board, the committee forms a general report, which is presented for the information of the Department of the Interior.

This committee studies and decides all matters connected with maritime health, and its resolutions are always of the greatest importance, because they show the watchfulness with which the public is protected against the introduction of epidemic or infectious diseases into the Republic, and therefore this is the committee which has charge of international sanitation.

The two committees on dwelling houses study the information found in the reports which are rendered by the sanitary ward inspectors as to the causes of ill health which they have discovered in their domiciliary visits, in accordance with the sanitary laws they decide on the works and improvements which are to be undertaken by the propri-

etors in order to place their buildings in good hygienic condition, ordering after the termination of the period which is granted in every case that a fresh inspection be made of the houses so as to determine the fines that are to be imposed should the proprietor fail in the exact compliance of the orders that have been given.

In the latter case, and after the lapse of the fresh term which is granted to the proprietor for the execution of the work that has been ordered, a fresh inspection is made, and in view of the report presented by the sanitary inspector, decision is given, either that the works so ordered have been executed wholly or in part, or that they have not as yet been commenced. If through the absolute non-compliance of the orders given by the committee a fresh fine is imposed, which in this case would be for a larger amount, and if after the lapse of the fresh term granted, and in view of the fact that the penalties imposed do not in any way relieve the proprietor of his obligations to improve the hygienic condition of his buildings, he still is a delinquent, the inspections are repeated with their respective reports, until the committee obtains the exact fulfillment of the orders given, and by this method of procedure a great improvement has been obtained in a considerable number of houses in the City of Mexico, whose sanitary conditions are much better than they used to be.

An exactly similar procedure is followed with the complaints that are sent in with respect to the bad hygienic conditions of certain dwellings, complaints which are sent to the Supreme Board of Health by the tenants of the houses that are in bad condition, and which are entered into a book that is kept by the secretary for that special purpose. The Committees on Dwellings at once give the proper orders with respect to every complaint that is brought before them, and their decisions are communicated to the sanitary inspector every day.

The Committees on Factories and Industries take turns in visiting the establishments that are about to be opened, on receipt of the petitions which the proprietors address to the district government, and of which the latter notifies the board.

Once the visit is made, and bearing in mind the detailed report which is rendered in every case, specifying if the legal requisites have been fulfilled and giving an opinion as to the importance of those which have been omitted, the board then determines whether it will grant or refuse the petitions presented by the owners.

The same inspection is carried out whenever any complaint is received as to the existing establishments, whenever the committees considers it necessary, or the board should so order it, because it is considered desirable for the public health.

The Committee on Drugstores makes regular and frequent visits of inspection to all the wholesale and retail drugstores that are found in the city and in the principal towns of the district, exercising the greatest vigilance and utmost severity in order to correct and punish, as may be

necessary, the infringements that may be discovered against the special regulations in force.

Thanks to the activity and perseverance with which these inspections have been carried out, it is now an established rule that every such establishment shall always have a responsible pharmacist employed, that the preparation of prescriptions is carefully attended to, that they are all provided with the substances, apparatus and utensils which are required by the regulations, and that the watchfulness and inspection on the part of the professor is constant and efficacious.

The Committee on Inhumations, Exhumations and Removal of Bodies takes care that in the actual cemeteries all the demands of hygiene are properly complied with; it visits and reports on all cases which are referred to it by the board respecting the opening of new cemeteries, as well as on anything relating to premature or judicial exhumations.

The Committee on Epidemology receives the notice which all physicians are obliged to give whenever they attend any persons who are attacked by infecto-contagious diseases. It at once advises the sanitary inspecting physician who has charge of that part of the city, so that he can visit the patient, and above all things ascertain that he is properly isolated or otherwise advise his removal to the hospital, which removal is at once ordered by the committee. The sanitary inspector ascertains during his visit that all the necessary precautions are taken to avoid contagion and the propagation of the disease. He gives instructions as to the proper methods of disinfecting the clothing and the dejecta of the patients. He takes notes of the sex, age, time that the patient has been sick, and the probable cause of the disease. At the same time, he makes a careful inspection of all the rooms in the house, looks at the condition of the drains, the closets, and all conduits which are used to drain the building. He ascertains that there are no rubbish heaps, mud, or any other substance that could be injurious to the health of the residents, that the water pipes are clean, free from any danger of filtration and do not communicate with the drains, and lastly, he takes notes of all the causes of insalubrity which exist in that street, specially reporting whether the water supply pipes pass through it, and whether there is a proper sewerage. On all these points, he presents a detailed report at once, which is referred to one of the two Committees on Dwelling Houses, so that in view of this document it may decide on the works which are to be executed in order to improve the hygienic conditions of the houses that have been inspected.

To the Committee on Veterinary Matters pertains the inspection of the slaughter houses, dairies, and hog yards, watchfulness over butcher shops, and everything else that has reference to epizootics with the object of avoiding their appearance and development.

The Committee on Judicial Matters looks after all questions which on account of their special character are immediately connected with

jurisprudence, and it also acts as an advisor to the other committees whenever any doubt arises as to the strict application of the law.

One of the most important dependencies of the board is the inspection of food and drink, which is under the immediate care of the member of the board who has charge of the first Committee on Food. The inspection of these substances is either made directly by the analytical chemists who visit the establishments with all the requisites demanded by the laws in force, and who in every case prepare a minute in which they set down all the incidents of the visit and the results obtained through the analysis of the inspected articles, or else by collections of samples which are taken by the agents of the inspecting department on a special order issued by the analytical chemists. These orders specify the class of the sample which is to be taken as well as the establishment that is to be visited. Of the substances that are collected, one part is well wrapped up and sealed and is left in the possession of the owner or manager of the establishment, while the other is taken to the chemical laboratory and there properly analyzed. On the minute which is made out in due form at the time of collecting the samples, the chemist who has made the analysis notes the result, and on that same document the committee fixes the penalty which is to be imposed whenever the article is found to be altered or adulterated.

The analyses which are made in the chemical laboratory are of such substances as milk, coffee, tea, bread, wine, beer, oil, sweets, and generally everything that is susceptible of adulteration or decomposition, as at times happens with cold meats, canned food, fish, etc. The chemical laboratory of the board is set up in the same building which it occupies, and is properly provided with all the utensils, re-agents, and apparatus necessary for the important and delicate labors to which it is dedicated.

The application of preventative vaccine is one of those branches to which the board has given great attention, and great zeal has been shown in the distribution of this preservative every day in the central office, which is situated in one of the departments of the building occupied by the board. The assistants to the curator vaccinate in the parish churches of the city, the sanitary inspectors in the police stations of their respective wards, and in the outside towns or the Federal District the vaccination is attended to by the inspectors of those towns.

The very important disinfection service is under the direct charge of a member of the Committee on Epidemology, and the staff consists of a chief, a machinist, a caretaker of the disinfected clothing, a coachman with his assistant, and four employees for the disinfection of the houses. This disinfection is practiced in the dwellings where any case has appeared of typhus, typhoid, small-pox, scarlatina or diphtheria. After collecting the clothing of the patients in order to carry them off at once to the stove, the disinfection of the dwelling rooms is effected by means of the irrigation apparatus for which purpose a solution of bichloride of mercury is employed at 1 to 1000. The disinfection of

the furniture is also carried out with this solution, or better still with a solution of carbolic acid at 5 per cent. In some cases bread crumb is employed for disinfecting pictures and fine paintings. On some occasions a solution of lime is employed for the closets, and creoline for destroying bad odors. The disinfection department is situated in the Plazuela de San Pablo, in the immediate vicinity of the Juarez Hospital.

The anti-hydrophobia inoculations are made every day by a member of the board, who has special charge of this service. The preservation of the medulæ and the preparation of the liquid for injection is carried out in the bacteriological laboratory, which is also established in the same building with the board. Among the many labors which are executed in this laboratory, we may specially mention the analysis of water, the examination of diphtheric products, the preparation of everything required by the Pasteur anti-rabic treatment, and the preparation and application of the anti-leprous serum of Dr. Carasquillo.

The board publishes a monthly bulletin which is the organ of the corporation, and care is taken to publish all the official data relating to the labors of the laboratories, the committee of the board, the sanitary medical inspectors, the reports of vaccine administered, of the mortality, tables showing the disinfections that have been made and the anti-rabic inoculations that have been practiced, together with reading matter on the most essential precepts of hygiene with the object of spreading a knowledge on the subject.

With this object, these articles are short, clear, concise, and avoid all scientific technicisms, so as to bring them within the reach of every intelligence. They are edited in turn by the scientific staff of the board, and the publication of the bulletin is under the charge of a special committee and is managed by the chief clerk of the secretary.

The staff of the secretary's office, according to the present appropriations, consists of a general secretary, a chief clerk, three subordinate chiefs, one of whom attends to one of the three sections into which the office is divided for the better attendance to the business; one corresponding clerk also in charge of the archives, a treasurer, six writing clerks, three messengers, two others for the chemical laboratory, one for the bacteriological laboratory, and one janitor.

Each section looks after a well defined branch of the business, and gives timely attention to all questions brought before it. The third section has exclusive charge of everything that is connected with the statistics, and this important branch of the business is being continually improved. In order to take full advantage of the work of this section, it is under the charge of a medical man. The secretary-general is also a medical man, with the object of facilitating his attendance to technical matters by a through understanding of his business.

The offices of the board can be considered as divided into three principal departments: in the first is a room dedicated to the work of

the committees, another is given up to the president, while a large hall, which is arranged according to the rules of hygiene, serves for the sessions of the board.

The second department contains the necessary offices and has five rooms in which are established the three sections, the general secretary, and the archives of the corporation. All these departments are provided with the necessary furniture and utensils for attending to the business that comes before them.

In the third department, and separated from the others by a corridor, are the chemical and bacteriological laboratories. The former is an ample and well situated room, and the second consists of several rooms in which the stoves and other utensils are conveniently arranged, each room being adapted to the character of the work or investigation to which it is dedicated. There is also a proper place for the cages of rabbits which have been inoculated with anti-rabic serum, as well as other animals or birds which are kept for the practice of scientific experiments.

In one of the passages, a series of closets and a urinal have been established, both of which satisfy every requisite stipulated in the sewer regulations, and which can be consulted by the owners of buildings, so as to serve as an object lesson in the proper way of setting them up in their own buildings.

On the lower floor of the same building and with a door to Encarnacion Street, are two large rooms which are dedicated to the application of Jenner vaccine and the anti-rabic serum of Pasteur.

Note XII

The Federal Government has decided to put under one exclusive administration and direction the four different hospitals located in the central portion of the City of Mexico, and destined to take care of the sick, (corresponding to the charitable institutions which are dependent upon the Department of the Interior). There is room in this hospital for eight hundred patients and eventually this number can be increased to nine hundred. It will be called *Hospital General* because it is destined to receive all kind of patients excepting the insane and the criminal.

Its objects will be: First: Good assistance to the patients; and second: To contribute to the teaching of medicine, and eventually to the hygienic education of the patients and inferior employees of the institution.

In regard to the disposition and distribution of wards, apartments intended for general service, sanitary installations, furniture, etc., great efforts have been made to make the building appear a fine piece of art

as well as to follow out the fundamental idea of the institution. After having examined twenty-two different places in the outskirts of the city, the one located at the southwestern part was selected, measuring 170,776 square meters, of which Mr. Pedro Serrano donated 115,542 square meters. Although this place is located out of the city, it can be easily reached by means of a carriage, on horseback, or on foot. The street railways from the city pass by the east and west sides, and several of the branches of street car lines have been lately built leading to the main entrance as well as to the secondary ones of the hospital. It is bounded on the west side by the Avenue of la Piedad with its four rows of trees, and on the other side by the Sanitary Zone. Two rows of trees separate the hospital from the surrounding buildings and serve, at the same time, to purify the air in the hospital.

The subjects in which treatment will be given at this institution will be as follows:

1. Medicine.
2. Surgery with its different branches.
3. Venereo-syphilitic diseases.
4. Children's diseases.
5. Obstetrics.
6. Tuberculosis.
7. Leprosy.
8. Typhoid fever.
9. Infectious children's diseases.
10. Infectious puerperal diseases.
11. Non-infected patients, paying certain fee.
12. Infected adult patients.
13. A laying-in-ward room.

The non-infected patients will be divided into two large departments, entirely separated, one for men, and the other for women. There will be also a department of gynecology, and an obstetrics operation room, and ventilated laying-in-ward room besides.

A large ward for those patients who suffer from all kinds of puerperal diseases will also be built. Those who suffer from tuberculosis, leprosy, typhoid fever, and other contagious diseases, will be placed in their respective departments absolutely independent one from another. So, the General Hospital will be made up of a certain number of especial hospitals all located on the same grounds, and under a sole common administration. In order to make clear the distribution of patients it has been necessary to group them into two large divisions: non-infected and infected patients. Those of the first class shall be divided into four sections, viz:

Department of women.
Department of men.
Department of children.
Department of maternity.

The rooms for the infected patients will be classified as follows:

1. Department of gynecology. The room occupied by this department is separate from the rest of them by means of a small wall with a door which gives access to the interior of the building, having another door for the exit.

2. Department of infectious puerperal diseases. In the department of maternity, although entirely isolated, is situated the subdepartment of infected women. This ward will be carefully divided into two sections: One room will be occupied by those patients whose symptoms are not well defined and the other is intended for the already patients of puerperal diseases.

3. Department of infectious children's diseases.

4. Department of tuberculosis.

5. Department of typhoid fever.

6. Department of contagious adults' diseases (small-pox, scarlet fever, etc).

7. Department of leprosy.

At the entrance of the hospital, and near the eastern portion of the wards, there is another department exclusively made for those patients whose sickness do not present the characteristics of a well defined disease. This department is divided up into two rooms, one occupied by men and the other for women. In each of these isolated rooms the patients will remain until the disease from which they suffer is completely determined, and then they are taken to their corresponding department. The wards are situated in the southern portion of the hospital, receiving constantly the pure air and the sunlight. The windows overlooking the north side will be widely opened in order to ventilate the rooms, as in the City of Mexico the prevailing air comes from the north. Each department of non-infected patients will be separated from the next one by a space measuring fifteen meters, and this space is enlarged for all other departments that are to be separated by a wall. The engineer in charge of the work had to cope with many obstacles to increase the distance between the buildings on account of the necessary increasing extension of the grounds, the enormous amount of money for cultivation and preservation of the gardens, and the great difficulty in the service by the increasing of the paths which lead to the different departments. These difficulties and those which arise from the methods of disinfection made the engineer change his plans and so reduce the distances between the buildings. For if these were increased, the area of the grounds would have to be enlarged and this increase in space would have to be at the rate of 400 square meters for every lineal meter.

Besides the departments for the patients there will be some buildings for the regular service of the hospital, which are to be located between the men's and women's departments. These buildings will be named as follows:

1. The administration buildings, with their surrounding dependencies, will be built for amphitheaters, for storing clothes and surgical instruments, washstands, etc. The lower floor is to be occupied by the library, and a reception room will be made in which the sessions of the board are to be held.

2. The operating room, which is to be built upon the same plan as that of the amphitheater of Roosevelt Hospital of New York.

3. Apartments for the employees of the institution.

4. General service building.

5. Baker's shop.

6. Department of pharmacy.

7. Department of hydrotherapy, with regular baths, immersion baths, shower baths, Turkish baths, etc.

8. Department of mecanotherapy and gymnasium.

9. Department of electro-therapeutics and radiography which will embrace also a small department of radioscopy.

10. Laundry shop.

11. Disinfection department.

12. Boiler house.

13. Deposit of cadavers.

14. Dissecting room.

15. Institute of pathological and bacteriological anatomy, biological chemistry, and experimental pathology. This building contains also some annexed ones for libraries, autopsy rooms, and an anatomical museum, this having at present over 3,000 specimens.

All these buildings are located on an area of 170,000 square meters of which amount 55,000 square meters will be set apart to gardens and avenues. This vast area will be enclosed by a wall, which will contribute to make all the buildings appear as if they constitute but one unit. Surrounding the wall there is a large row of trees (twenty meters wide) called the Sanitary Zone that has been planted for the purpose of separating the hospital from all the houses which might be built in its neighborhood. The row of trees will also serve to isolate the buildings of the hospital as well as to purify the air.

A special and thorough method of draining will be carried throughout the hospital grounds. The most perfect system of irrigation will be put into practice so as to make the hospital the cleanest place in the city. Water (166 litres per person daily) will come from the artesian wells and from the Public Water Works of the city. That which is to be used for the sprinkling of gardens and general washing of the hospital will come through the canal that goes to Xochimilio Lake. There are also water reservoirs in several parts of the grounds to supply all the departments of the hospital. A water reservoir situated at convenient height is to be exclusively reserved for the bathing rooms of the departments.

In order to make easier the service of carrying food, medicines, etc., a motor wagon (Decauville) will run through all the wards.

The engineer had also the good idea of placing movable platforms so as to make the service work easier. The transportation of medicines and clothes will take place on wagons and by means of a special mechanism. Electric light will be installed in all the departments.

A telephone service will put all the buildings into communication with the superintendent's and technic-director's offices.

There will be in all the departments wall clocks connected by means of electricity with the clocks of the superintendent's office, so that all of them will keep the same time.

The transportation of the patients to the hospital will be made in four ways, as follows:

1. The infected patients will be taken from their homes by means of special closed carriages to the hospital, where they will be disinfected as soon as they arrive.

2. The non-infected patients will be transported in special litters made for the purpose.

3. Syphilitic women sent to the hospital by order of the Board of Sanity are to be taken in closed omnibuses.

4. Patients sent by their doctor to the dispensary of the hospital are to be taken in ambulances.

In the central part of the City of Mexico there will be established registered offices for those patients who are not able to go to the hospital.

Note XIII

In 1888 the capital of the Republic, having determined to devise a scheme for the reconstruction of the city sewers, appointed a special commission of engineers to study the necessary documents relative to this work.

After three years of scrupulous study the commission presented a project in a detailed report which was submitted for the examination of the engineer, Mr. Luis Espinosa, and in order to formulate a definite decision the City Council selected a commission made up of the engineers, Messrs. Manuel M. Contreras, Leandro Fernández, at present Secretary of the Department of Public Promotion, and Luis Espinosa, who, in conjunction with the engineer, Roberto Gayol, author of the project, presented the final report. The project is already in course of construction in the City of Mexico. The injection of water is to be employed for the cleaning of the sewers.

In order to perfect the details of the work, a comparative study was made of the water systems of the great European and American cities.

They observed how each of the difficulties which were found in Mexico had been solved, but also the inconveniences and defects were noted in every case.

The most important part of the work in its execution is that it satisfies the principal point of all sanitary work, namely, that it is simple in its form and details. And in order to attain that result in the surest possible way the principle of not doing more than is absolutely necessary was followed, so that during the construction, as well as in the completion, it might insure the final sanitary result.

For that reason the details were carefully studied with reference to simplicity in the construction. Confidence in the right execution of the work was also assured, and the whole system can be easily handled with great facility.

To appreciate this latter, it is enough to notice the way the sewers are placed; the disposition of them, being the leading point in the project, is well worthy describing in brief. This description will be better understood if * Design No. 1 is carefully examined as it indicates the kind, distribution, and connections under the limitations fixed by the City Council in ordering the carrying out of this project to improve the sanitary conditions of the city. The quality of the sewers may be distinguished by the thickness and color of the lines. The thick red lines show the course followed by the main sewers; these are shown in the design beginning in the water distributing pipes and ending in the main sewers. Sometimes when the topographical irregularities of the city require that some of the lateral sewers divide themselves, the arrangement given to them will allow the water destined to clean them to reach every one of the sewers, as special care has been taken to avoid isolated ends which never could be cleaned, and which are not admitted in a good system of sewerage, as each one of them constitutes a source of infection. The dangers emanating from its existence have been completely avoided and the fact that the sewers can be so easily washed serves to assure that they will be kept clean and in right working condition.

As formerly indicated, the water from La Viga Canal will be used for the cleaning of sewers, said water is to be conveyed to the southern end of 12th Street through a branch canal already built, and the reservoir from which the water is taken will be established above the "Gate of La Viga," and for this purpose the necessary flood-gate will be built. With a portion of water now running through the Viga Canal it will be possible *every day to clean all the city sewerage*, transmitting intermittently large bodies of water. These will pass through conduits established in the more gentle slopes with a swiftness of one meter per second, although in some instances this will reach two meters and even more. In case a volume of water of about six cubic meters is obtained, it will be possible to establish in all the city sewers a constant current

* On exhibition in the Liberal Arts Exhibit in the Mexican Building.

of water whose rapidity will never be less than sixty centimeters per second. It is out of question that it is not possible to transmit large bodies of water daily through all the sewers, but even considering the most unfavorable case (let us suppose this event should occur), it would then be sufficient to send *four men* every day to each one of the zones. And, as there are five zones, *twenty men will be enough* to clean *all the sewers every day*. Having only taken advantage of the favorable circumstances, and not because the project reveals any special ability, there is no harm in calling the attention to the fact that up to date no city in the world can clean its sewerage every day as can be done, if necessary for so doing, in the City of Mexico.

The main sewers are of a circular section, built of compressed brick and a mixture of cement and hydraulic lime, but the bottom is covered with cement in order to obtain a surface as smooth and compact as possible. The diameter of these sewers does not exceed 1.75 meters, except in the connecting place of two of them, there being there 2.50 meters. The distributing water pipes are made of steel seventy-five centimeters in diameter and four milometers in thickness, laid longitudinally and covered inside and outside with an asphalt preparation which will preserve them forever as shown by experience. The lateral sewers are constructed with clay pipes of a circular section, vitrified and varnished with salt. The diameter of these sewers does not exceed in most cases forty centimeters, and only as an exception sometimes reaches to sixty centimeters.

The size of the sewers was a question carefully studied during many years of constant work to gather what was necessary. By the study of these papers the information relative to the undertaking followed, as well as all considerations upon which the principals that were taken as a basis to fix the capacity of the conduit's outlet, were founded. Through the same places, pipes for the distribution of washing water will be built. These are to be special sewers which will receive the slop and rain water from the houses located in those places. These conduits will empty their contents periodically into the main sewers, and, on this account, they have been made of a smaller size.

The unions, connections, and bifurcations of the sewers are made with the greatest care in order to avoid possible obstacles to the free running of the liquids, and to avoid the clashing of currents. Great care is also taken to lessen the effects of the change of the water course by making conduits steeper in the curves. The pipes for the rain water were carefully studied and it seems that a satisfactory result was obtained which will prevent the passing of rubbish and clay from the streets to the sewers. In spite of this, all sorts of precautions have been taken to guard against the obstruction of sewers, and although it is expected that with the current of water all danger will disappear, the possibility of an accidental obstruction has been foreseen and manholes and lamp-holes are in construction. This allows the sewers to be

inspected and all obstructions can be removed with ease without destroying the pavement and sewers. No matter what precautions are taken to avoid obstructions in the sewers, the infectious and pestilent germs would remain, but it being a principle generally admitted that the *sewers must be conveniently ventilated*, the details relative to the ventilation of same were carefully studied with due consideration of the experience already acquired in European and American cities by study and observation of many years. From these studies the method now being followed was obtained.

It is not necessary to enter in details interesting only to people who would like to study the undertaking deeply. These persons can refer to the information departments, where, step by step, all the details are analyzed and the reason for every conclusion explained.

Desiring to finish this article, we will refer again to the designs, where general details can be had which will show in the best manner the system of the sewer's work. For instance, * Design 2 represents a part of the Valley of Mexco, comprising a distance of twenty kilometers around the City of Mexico. In that design the course to be followed by the water from the Springs of Chalco and Xochimilco is marshy, being marked with blue lines. This water from the springs will pass directly to the canals mentioned in * Design 2, and will go to the south end of 12th Street through the Viga and Derivation Canals. At the end of 12th Street and near to the ex-gate of "La Piedad" a very powerful pump has been stationed, which will elevate 1,000 litres of water per second and discharge it into a steel pipe of 1.08 meters in diameter with a pressure of twelve hectograms per square centimeter. The pump engine is of triple expansion and condensation, it being one of the most perfect ever constructed. The water elevated by the pump will reach the city through conduits, branched and crossing one another between the sewers as shown in * Designs 1 and 2. In the sewers marked with red ink the water loses its purity and after reaching the grand canal is thrown out of the valley as a residue.

Note XIV

The Central Deposit and the Laboratory of Pharmacy and Chemistry for the Public Assistance of the Federal District were founded in 1880, having for its object the obtaining in a more efficacious and opportune manner the treatment of the patients at the different charitable institutions belonging to the Board of Public Assistance. Said Deposit and Laboratory were re-organized in 1882 in order to perfect the service of the former, and at the same time to extend the pharmaceutical products of the latter, thus improving the home service as well as the supplying

* On exhibition in the Liberal Arts Exhibit in the Mexican Building.

of the hospitals. The data given by special books show that there has been 671,572 patients treated at the different charitable institutions, whose expenses reach the amount of $25,000 per year. The direction and administration of these institutions spent the the sum of $7,500 per year.

San Andres Hospital. The building in which this hospital is established was occupied by the Jesuists in 1767, and before that time it served as a Novitiate of the same order of Jesuists. The Novitiate was founded by the heirs of Mr. Melchor Cuellar and Mrs. Maria Nuño de Aguilar. The work of building began in 1626 and was finished in 1642 after having met with innumerable difficulties. In 1650 the building was abandoned on account of deterioration and lack of funds, and it remained in this situation for the period of sixteen years, and at the end of that time was re-established by Mr. Andrés Tapia Carvajal, who changed the name of Santa Ana, that it formerly had, for that of San Andrés which still remains. The work of re-establishment lasted till 1714 and since that time it remained almost abandoned till 1779, at which time an epidemic of small pox destroyed 8,821 lives. Then the Archbishop, Rev. Alonso de Haro y Peral, asked the Viceroy for the building in order to accommodate five hundred infected persons. When the epidemic ended the Archbishop would not agree to give up the hospital and he used all the means he could in order that it would continue opened, and he succeeded at last. It must be made known that from September 26, 1784, up to February 10, 1790, the hospital spent $500,000 (Mexican currency) of its own funds.

San Andres Hospital was in charge of the Bishopric of Mexico until the issue of the laws, called the Reformed Laws, by which it was placed under public auction by the Mexican Government. Then it was in charge of the institution called the Sisters of Charity (in 1871) but they delivered it to the Municipalty of Mexico as they preferred to leave the country rather than separate themselves. This happened on account of a decree of the Union Congress, sanctioned by the Government of the Republic. The building occupied by the *San Andres Hospital* is vast and commodious, although somewhat dark. It has undergone several transformations, however, and many departments have been added. Among these latter is a women's ward which actually satisfies all the demands of hygiene and modern progress. The hospital is constantly attended by the best professors of the School of Medicine of the City of Mexico, by doctors of the highest reputation in the Republic, by eminent professors in medicine, and by the best learned physicians and skillful surgeons, being among them many who have been practicing in famous European hospitals.

San Andres Hospital contains thirteen wards and it can easily make room for three hundred and twenty patients. Its medical staff is as follows: A director general, thirteen chief physicians, thirteen assistants, thirteen interne doctors, thirteen chief nurses, thirteen supernum-

eraries doctors, twenty-six subaltern nurses, three pharmacists. The annual expenses to care for the patients reach the amount of $56,500. The expenses for the scientific and administrative staff are $14,500 making an annual total of $71,000.

JUAREZ HOSPITAL. Father Pedro de Gante founded a church (San Pablo) which was administered by Franciscan monks as a branch of a parish until 1569, on which date it was ceded to the Archbishop of Mexico in order that he would install a curate. Later on the Agustine Brothers solicited the church to form a corporation of their order, and in 1575 they succeeded in becoming the owners of the building. A few years later, in 1581, when a great part of the monastery had been built, they demolished the church which then was substituted by the one which actually exists. During the greatest grandeur of the monastic orders, the building of the community of the Agustine Brothers acquired a great name and fame, but it soon went down in such manner that it became necessary to use the most deteriorated part of the building as a headquarters.

The Municipality of San Andrés having a contract for the attendance of the patients, was in debt for the sum of $8,000 (Mexican currency) and on account of this fact it refused to the hospital the right of receiving patients, but it once happened that the municipalty obliged the hospital to admit a seriously wounded patient. This act determined an arrangement by which the municipality was obliged to pay its debt in a more rapid manner than it should otherwise. The deed referred to became sufficient to suggest the idea of building a Municipal Hospital that could be kept by public funds. An opportunity was awaited to realize that project when the war between the United States and Mexico was declared, and the building of San Pablo was chosen as a provisional hospital for the wounded. Mr. José Urbano Fonseca, author of the enterprise, solicited diligently that the part alloted for headquarters would be conveniently changed and the new *Asilo de Beneficiencia* should be opened for the wounded of the Battle of Padierna (August 23, 1847).

After the city became occupied by the United States troops the hospital continued to serve for the purpose for which it was built, and Mr. Fonseca, conquering all the obstacles he had to meet with, succeeded in putting up forty beds for men and twenty for women and for any kind of patients excepting the criminals, who were taken care of at the San Hipolito building until Mr. Miguel Azcarate, Governor of the Federal District, ordered them to be moved to San Pablo in 1850.

At present this hospital has fifteen wards that can hold six hundred patients, and it also has two large departments for the contagious patients. The scientific body is made up of the following staff: Fifteen head doctors, sixteen undergraduate doctors, sixteen assistants, ten head nurses, fifteen nurses, two pharmacists.

There have been treated annually 212,272 patients, and the annual expenses to care for them reached the sum of $51,000; annual expenses for the management, $21,000.

Morelos Hospital. Several hospitals had been established in the City of Mexico as the *Hospital de Jesus* founded by Mr. Fernando Cortés; El Real erected by the King of Spain and only for the use of the Indians; the *Amor de Dios*, for the syphilitic patients, which was built by the Archbishop Zumarraga, and many other hospitals that owed their existence to the philanthropist and venerable Mr. Albino Alvarez, who also founded a charitable order in San Hipólito.

As the population of the City of Mexico grew larger and the epidemics increased, the mortality went up to a high degree, and Dr. Pedro Lopez, one of the first professors in New Spain, saw the necessity of building a new hospital. This he accomplished with his own fortune, which was large and having only for a motto his love for the unfortunate. So, all the expenses that the hospital incurred were met by Mr. Lopez.

The Sisters of Charity took charge of this hospital from 1845 to December 20, 1864, in which time they left the country of their own free will. The 12th of July (1868) all the syphilitic patients of the *San Andres Hospital* were removed to the San Juan de Dios Hospital. At present there are treated in this hospital two hundred and thirty-eight patients, located in seven wards. The scientific staff comprises seven doctors, seven post-graduate doctors, one individual to take care of the surgical instruments, two pharmacists, six chief nurses, and three nurses. 113,087 patients have been treated in this hospital and their expenses amount to $30,000. The annual expenses of the administration are $2,000, resulting in the total amount of $112,000.

The Orphan Home La Cuna. In the year 1776, there arrived in the City of Mexico as Archbishop of the diocese, the Rev. Francisco Antonio Lorenzana y Butrón, and this worthy prelate bought with his own money the building in which the asylum was to be established. He endowed the institution with a service equal to the Inclusa of Madrid, and carried all the expenses, exercising all his active influence in order that the asylum might become a good institution. This went on up to 1771, on which date the Archbishop returned to Spain. But, although Archbishop Lorenzana ceased to give his moral and material protection to House of la Cuna, his benefactory work was followed by his worthy successor, Rev. Alonso Nuñez de Haro y Peralta, who not only gave $2,400 annually of his own money, but attended to its necessities in an earnest way regardless of the obstacles that he had to meet with. He founded also an order called Orden de Caridad that took charge of the administration of the institution. Being the Rev. Nuñez de Haro (perpetual administrator of the Orphan Home) in Spain, his experience and talent were sufficient to exercise a great influence in the government. As a

result of this the rules which he formed for the order were approved by royal decree July 19, 1774, obtaining at the same time spontaneous congratulations of Charles III and his Council.

From January 21st, 1772, La Cuna was located at the house No. 3, Puente de la Merced Street. La Cuna was re-built in 1898 with an endowment of $15,000 made by Mrs. Lamadrid. The building contains some rooms for teaching purposes and different departments. It gives room to one hundred and eighty-seven children and the necessary nurses. Its attendant's staff is made up of eighteen servants and twenty-two employees belonging to the administrative and educational staff.

A Department of Inspection of nurses has lately been added. This has for its principal object the inspection of women who are to nurse the children, the assurance of their perfect health, and the quality of their milk. So, the asylum has today a perfect service of trained nurses. The annual expenses of the asylum are $18,000 and the administrative and educational staff spend $15,000 per year. So, the total expenses reach the amount of $33,000 yearly.

Maternity Home for Women and Children. The Rev. Ortiz Cortés, Canon of the Cathedral of the City of Mexico, as well as many others who had the glory to be founders of this institution, established a Department of Concealed Parturition, as it was called, being situated in the place occupied today by the Maternity Home. This hospital was exclusively made for those persons that through necessity had to conceal themselves, and for those women who lacked necessary funds after delivery.

The widow of the so-called Emperor Maximilian conceived the idea of rebuilding the Home, whose useful aim was of great importance to her. Thus, firm in her idea, she succeeded in carrying out her plan, and, as president of the *Junta de Beneficencia*, she ordered, April 7th, 1865, that the Maternity Home should be built, and she trusted the management of the work to the architect, Bustillos. The building was finished in 1866, after having cost $11,194.

The furniture, clothes, and other articles cost $2,820, and the Minister of the Interior inaugurated the Home June 7th, 1866.

In 1848, Dr. Luis Fernández Gallardo opened a department for children at the *San Andres Hospital* which cost $300,000. For this he counted on the backing of the municipality. Mr. Pio Bermejillo, and other parties, gave the beds and other useful articles.

In 1869, Mrs. Anazola de Baz, who was in charge of the Maternity Home, conceived the idea of moving the children from the department of San Andrés to the place which they occupy at present, and at the same time she obtained from Mr. Sebastián Lerdo de Tejada, Minister of Foreign Relations at that time, one section of the building and $3,000 for its arrangement. January 12th of the same year the City Council approved the removing of the children, and ordered that the hospital

instead of being called San Carlos should be called thereafter "The Maternity Home for Women and Children."

At present the Maternity Home contains seventy-five female patients, first and second departments for children, a consultation room for medical purposes, and one for odontoloy. The scientific staff is made up of six doctors, three post-graduate doctors, three trained nurses, ten nurses, and one instrument keeper. The expenses incurred by the 42,123 patients treated in the last year (1899) were $11,000. Cost of the administrative staff per year, $6,500. Total expenses, $17,500 per year.

THE ESCUELA INDUSTRIAL. Mr. Manuel Eduardo Goroztiza, the celebrated dramatic writer, foresaw the necessity of placing the young men offenders in a place where they learned to return to the right path by means of an artistic and scientific education, as well as the constant teaching of good moral and practical principles. He at last succeeded in founding (in 1841) a Correction School which was opened later on in one of the departments of the Poor House. In accordance with the Department of the Interior this school constituted an independent asylum for young men offenders. But, although the establishment was considered as a branch of the city prison, it became necessary to admit those young men who either could not be received in any other special school on account of lack of room or were sent there for their correction and instruction. As before stated, there existed in the Orphan Home a small location destined to receive the young men offenders, but this location was in such bad condition that the director of the school conceived the idea of establishing a school of correctional education in some agricultural colony. With $4,000 appropriated by the government and $10,000 taken from the school fund, an edifice was built located near the village of Coyoacán at the surroundings of the City of Mexico. At the end of March, 1881, the *Junta de Beneficencia* took possession of the building which is the best one in the city, and on the first of April of the next year the young men who were stationed at the Tecpan were moved to it. Lately there has been spent about $20,000 in building improvements. The schools and shops are under the supervision of twelve professors, six overseers, two chiefs, and seven instructors. There is a director, a prefect, a sub-prefect, a clerk, a physician, and thirty servants. There are actually four hundred and twenty pupils attending the schools and shops every day. Expenses of the pupils reach the amount of $40,000 per year, and the administration expenses are $15,000, the total annual amount being $55,000.

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Statistics of mining and metallurgy.

DIVISION X

Electricity and Electrical Appliances

GROUP LXXV

Electric Lighting

77. Class 284. Arc lighting.

77. Class 285. Incandescent lighting.

77. Class 286. Regulating and controlling devices.

77. Class 287. Apparatus used in the photometry of the electric light.

77. Class 288. Telegraphic instruments, transmitters, receivers and recording apparatus.

77. Class 289. Multiplex apparatus.

77. Class 290. Synchronous telegraph apparatus.

GROUP LXXVI

Telegraphy and Telephony

77. Class 291. Telephone instruments, transmitters, receivers.

GROUP LXXVII

Machinery and Apparatus for Generating and Using Electricity

DIVISION XI

Transportation

Railways, Vehicles, Vessels

Vehicles

GROUP LXXXII

Wheeled Vehicles for Horse Power

Vessels

GROUP LXXXVII

History and Literature

DIVISION XII

Ordnance and Munitions of War

GROUP LXXXVIII

Ordnance

GROUP XCIV

History and Literature

DIVISION XIII

Manufactures

GROUP XCV

Chemicals and Drugs

GROUP XCVII

Soaps, Essences, and Perfumery. Toilet Articles

GROUP XCVIII

Traveling, Camping, and Sporting Apparatus

GROUP XCIX

Furniture and Interior Decorations

GROUP C

Carvings and Art Metal Work

GROUP CI

Ceramics and Allied Products

GROUP CII

Glass and Glass Ware

GROUP CIV

Heating, Cooking, and Washing Apparatus, and Kitchen Appliances

GROUP CVIII

Jute, Ramie, and Other Vegetable and Mineral Fabrics. Fabrics of Glass

GROUP CXI

Woolens, Cottens, Linens, Silks, Furs, and Millinery. Toys and Barbers' Supplies

GROUP CXIV

Scales, Weights, and Measures

GROUP CXVII

Miscellaneous Articles

GROUP CXVII—A

Cigars and cigarettes were omitted from the official classification, and grouping and classification (Group CXVII—A and Class 474—A) are merely for convenience of reference.

DIVISION XIV

Graphic Arts

GROUP CXVIII

Materials for Printing, Engraving, and Bookbinding

GROUP CXX

Results in Printing, Engraving, and Bookbinding

DIVISION XV

Liberal Arts

Education, Engineering, Public Works, Sanitation, Constructive Architecture, Social Economy, Music and the Drama

GROUP CXXVI

Medical, Surgical, and Dental Instruments

Page

123. Class 516. Medical, surgical, and dental instruments and appliances.

GROUP CXXVII

Engineering and Public Works

124. Class 517. Materials and processes of civil engineering.

124. Class 518. Surveys.

124. Class 524. Models, plans, and designs of public works.

GROUP CXXVIII

Hygiene and Sanitation

125. Class 526. Hospitals.

GROUP CXXIX

Constructive Architecture

125. Class 531. Materials, plans, and designs of public and private buildings.

GROUP CXXX

Social Economy

126. Class 541. Public or private movements for the welfare of the people.

126. Class 542. Public charities—correction.

GROUP CXXXI

Music, Musical Instruments, and the Drama

126. Class 543. History and theory of music; musical scores.

DIVISION XVI

Ethnology and Archæology

DIVISION XVII

Fine Arts

GROUP CXXXVI

Appendix